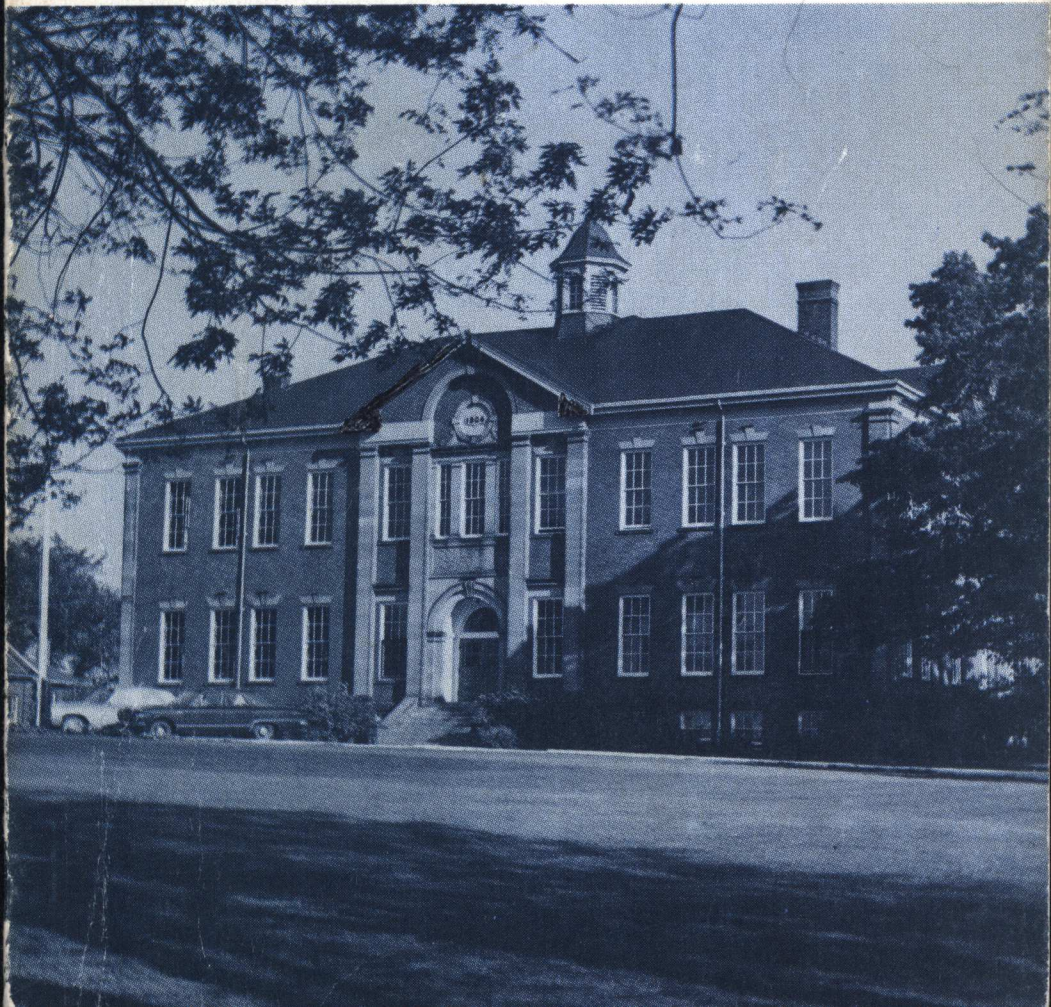


*W. M. Langille*

# NOVA SCOTIA AGRICULTURAL COLLEGE

1971 - 1972





## APPLICATION FOR ADMISSION

(To be used only by a candidate who is applying for admission as a new student.)

### NOVA SCOTIA AGRICULTURAL COLLEGE

Date.....

Name in full.....

Address.....

Birthday.....  
Day            Month            Year

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

Address.....

Are you a close relative of a former student?            If so, please give the name, degree of relationship, and, if possible, the year of the former student.....

.....  
If you were not in high school during the 1970-71 school year, what educational institution or institutions have you attended since you were in high school?.....

.....  
Course Desired:

First Year Technician: Agricultural Business.....

Animal Science.....

Plant Science.....

Agricultural Engineering.....

First Year Degree.....

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 Course will not be considered until an official transcript of the required marks (provincial or school) has been submitted.

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 21)

**Questions to be answered and form returned to:**

**THE REGISTRAR**

**THE NOVA SCOTIA AGRICULTURAL COLLEGE**

**TRURO**

Please complete the reverse side



**SIXTY SIXTH ANNUAL**  
**CALENDAR**

OF THE

**NOVA SCOTIA**  
**AGRICULTURAL COLLEGE**  
**TRURO**

UNDER

The Nova Scotia Department  
of Agriculture and Marketing

**1971 – 1972**

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# 1971

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

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

# 1972

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

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

## CALENDAR FOR SESSION – 1971-72

1971

August 30	Refresher Course for selected First Year Technician students commences at 1:30 p.m.
September 9-10	Supplemental examinations
September 13	Registration for all first year students and all other students registering for the first time
September 14	Registration for second and third year students
September 15	Lectures commence at 8:15 a.m.
October 11	Thanksgiving Day. No classes
November 5-8	Mid-term break
November 11	Classes as usual
To be announced	First term examinations
December 17	Last day of first term.

1972

January 3	Second term lectures commence at 8:15 a.m.
March 1-5	Mid-term break
March 31-April 3	Easter week end. No classes
To be announced	Second term examinations
May 3	Graduation exercises

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

- for Refresher Course students, the morning of August 30;
- for students who have to write supplemental examinations, after dinner on September 8;
- for all new students, after 11 a.m. on September 12;
- for all other students, after dinner on September 13.

Any student who wishes to use the facilities of a dormitory before the times set down above will be charged at the rate of \$5.00 per day.

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 10, a penalty of \$5.00 will be imposed for each day of lectures until registration has been completed.



GENERAL  
INFORMATION



# OFFICERS OF ADMINISTRATION

## Principal

W. A. JENKINS, B.Sc. (Agr.) (McGill), M.Sc. (Cornell),  
Dr. P. A. (Harvard)

## Vice-Principal

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

## Dean, Vocational and Technical Training

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

## Registrar

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

## Librarian

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

## Dean of Residence—Chaplain

REV. D. I. MacEACHERN, B.A. (Mt. Allison), B.D. (P.  
Hill)

## Business Manager

R. F. McEWAN

## Secretary

MRS. A. MARIE HARTIGAN

## Nurse

MRS. AGNES YUILL, R.N.

# FACULTY COUNCIL

## Principal

W. A. JENKINS, BSc. (Agr.) (McGill), M.Sc. (Cornell),  
Dr. P. A. (Harvard)

## Agricultural Engineering

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

*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)

*Assistant Professor*

## Astronomy

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

*Professor*

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

*Associate Professor*

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

*Assistant Professor*

## Animal Science

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

*Associate Professor*

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

*Associate Professor*

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

*Lecturer*

G. V. M. MOWBRAY, D.V.M. (Toronto)

*Visiting Lecturer*

G. W. CHANT, B.S.A. (Guelph)

*Lecturer (on loan)*

## Biology

A. E. ROLAND, B.A. (Acadia), M.A. (Toronto), Ph.D.  
(Wisconsin)

*Professor*

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

*Assistant Professor*

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

*Lecturer*

R. W. HOUNSELL, B.Sc. "Honours" (Acadia), M.S.  
(Acadia)

*Assistant Professor*

R. B. PORTH, B.S.A. (Br. Columbia), M.S.A. (Br. Colum-  
bia) *Assistant Professor*

## Chemistry

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

*Associate Professor*

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

*Assistant Professor*

H. M. McCONNELL, B.Sc. (Agr.) (McGill)

*Lecturer*

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

*Lecturer*

K. S. MACLEAN, B.Sc. (Dalhousie), M.Sc. (McGill)

*Associate Professor*

## Economics and Business Management

W. A. JENKINS, B.Sc. (Agr.) (McGill), M.Sc. (Cornell),

Dr. P. A. (Harvard)

*Principal and Professor*

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

*Associate Professor*

W. V. GRANT, B.Sc. (Agr.) (McGill), M.Sc. (Connecticut)

*Lecturer (on loan), Director of Extension Services*

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

*Lecturer*

D. E. E. DORAN, B.S.A. (Toronto), M.S.A. (Toronto)  
*Assistant Professor*

T. C. GUNN, B.Sc. (Agr.) (McGill), M.Sc. (Connecticut)  
*Lecturer (on loan)*

A. M. CAMPBELL, C.A.  
*Lecturer*

**English and Social Sciences**

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

REV. D. I. MacEACHERN, B.A. (Mt. Allison), B.D. (Pine Hill)  
*Assistant Professor*

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

REV. G. A. DELANEY, B.A. (Gordon), B.D. (Acadia),  
Th.M. (Duke) *Assistant Professor*

**Horticulture**

H. A. L. McLAUGHLIN, B.Sc. (Agr.) (McGill), M.Sc. (Cornell)  
*Associate Professor*

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

**Mathematics and Physics**

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

S. G. SMITH, B.Sc. (Mt. Allison), M.Sc. (Windsor)  
*Assistant 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*

**Physical Education**

K. S. MARCHANT, B.P.Ed. (New Brunswick)  
*Lecturer*

Lecturers on loan are members of the staff of the Nova Scotia Department of Agriculture and Marketing.



## 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. Students are requested not to ask for a postponement. A student whose payment is ten days overdue and who has not made arrangements satisfactory to the College may be asked to withdraw.

## DEGREE COURSE

Payments due September 13, 1971.

Tuition .....	\$200
Board and lodging .....	\$315
Caution and laboratory deposit .....	\$ 20
Students' Council .....	\$ 40
Medical fee .....	<u>\$ 6</u>
	\$581

Payments due January 3, 1972

Tuition .....	\$200
Board and lodging .....	<u>\$375</u>
	\$575

Books (estimated), September 13, 1971 \$75

## TECHNICIAN AND TECHNOLOGIST COURSES

Tuition

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

Payments due September 13, 1971

Board and lodging .....	\$315
Caution and laboratory deposit .....	\$ 20
Students' Council .....	\$ 40
Medical fee .....	<u>\$ 6</u>
	\$381

Payments due January 3, 1972

Board and lodging .....	\$375
-------------------------	-------

Books (estimated), September 13, 1971 \$65

The United Students' Council has approved of a fee of \$6.00 for the medical services fund to be collected from all

students at the time of registration. The fund, with the exception noted below, will look after the costs of a doctor's service which are not provided for by a provincial medical insurance plan or a private plan and of non-prescription drugs for the infirmary. It will not provide for prescription drugs, hospitalization or operations. All doctor's services will be requested by the College nurse or, in an emergency in which she cannot be available, reported to her immediately after the service has been provided.

If a student withdraws during the term, except for health or other compelling compassionate reasons, he will receive no refund of the tuition fee. Any balance of board and lodging payment over and above the initial deposit of \$25.00 will be refunded.

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.

## 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.

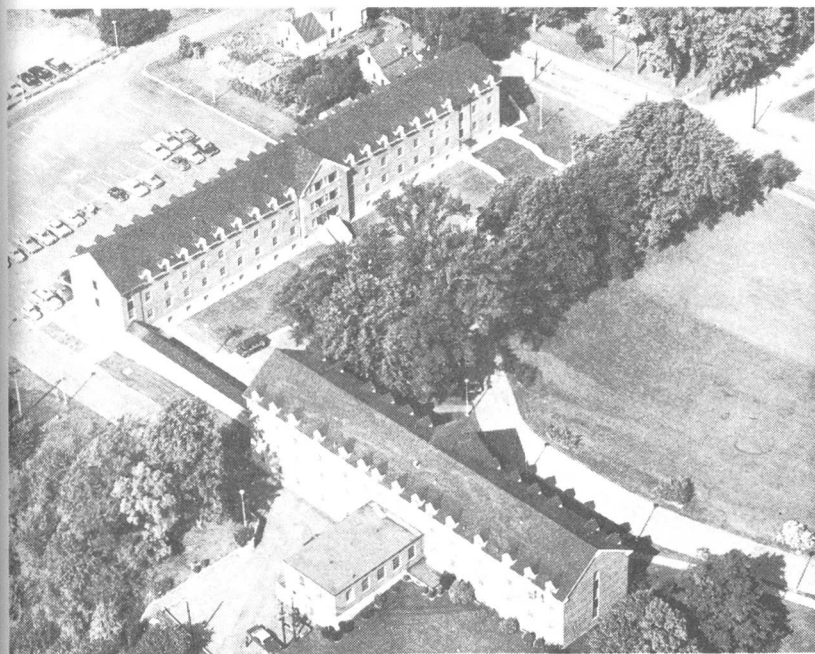
Over the years instruction has been offered at various levels: among them credits towards a degree in Agriculture, semi-vocational courses, technician courses, and vocational short courses. In 1971-72 credits towards a science degree in Agriculture and an engineering degree in Agriculture, four technician courses, technologist courses and vocational short courses will be offered.



During the sixty-six 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. In line with changes made at Macdonald College and the University of Guelph, the Nova Scotia Agricultural College is now offering three years of degree credits in advance of junior matriculation and two years in advance of senior matriculation.

A number of graduates of the Nova Scotia Agricultural College have continued their studies at the Ontario Veterinary College (now a college of the University of Guelph). Qualified graduates from the Degree Course are considered for admission to the first year in veterinary medicine.

Graduates of the pre-engineering course at the Nova Scotia Agricultural College will be admitted without further examina-



tion 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 sixty-six years the College has been in existence, is conclusive evidence that Maritime 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 Horticultural Building, the Dairy Building, the Cox Institute of Agricultural Technology, the Boulden Building, the Agricultural Mechanics Building and a new barn 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. Trueman House, Fraser House and Chapman House provide living accommodations for approximately 500 male students.

The Faculty reserves the right to withhold any first year

course 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 various courses arranged for the 1971-72 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 to be necessary.

**Post Office Address:**

All mail should be addressed:

Nova Scotia Agricultural College, Truro, N. S.

**Telephone:**

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

**Banks:**

The following chartered banks have branches in Truro:

The Bank of Nova Scotia

The Canadian Imperial Bank of Commerce

**Telegrams:**

Branches of both Canadian National Telegraphs and Canadian Pacific Telegraphs are located in Truro.

Address all telegrams in care of:

Nova Scotia Agricultural College, Truro, N. S.

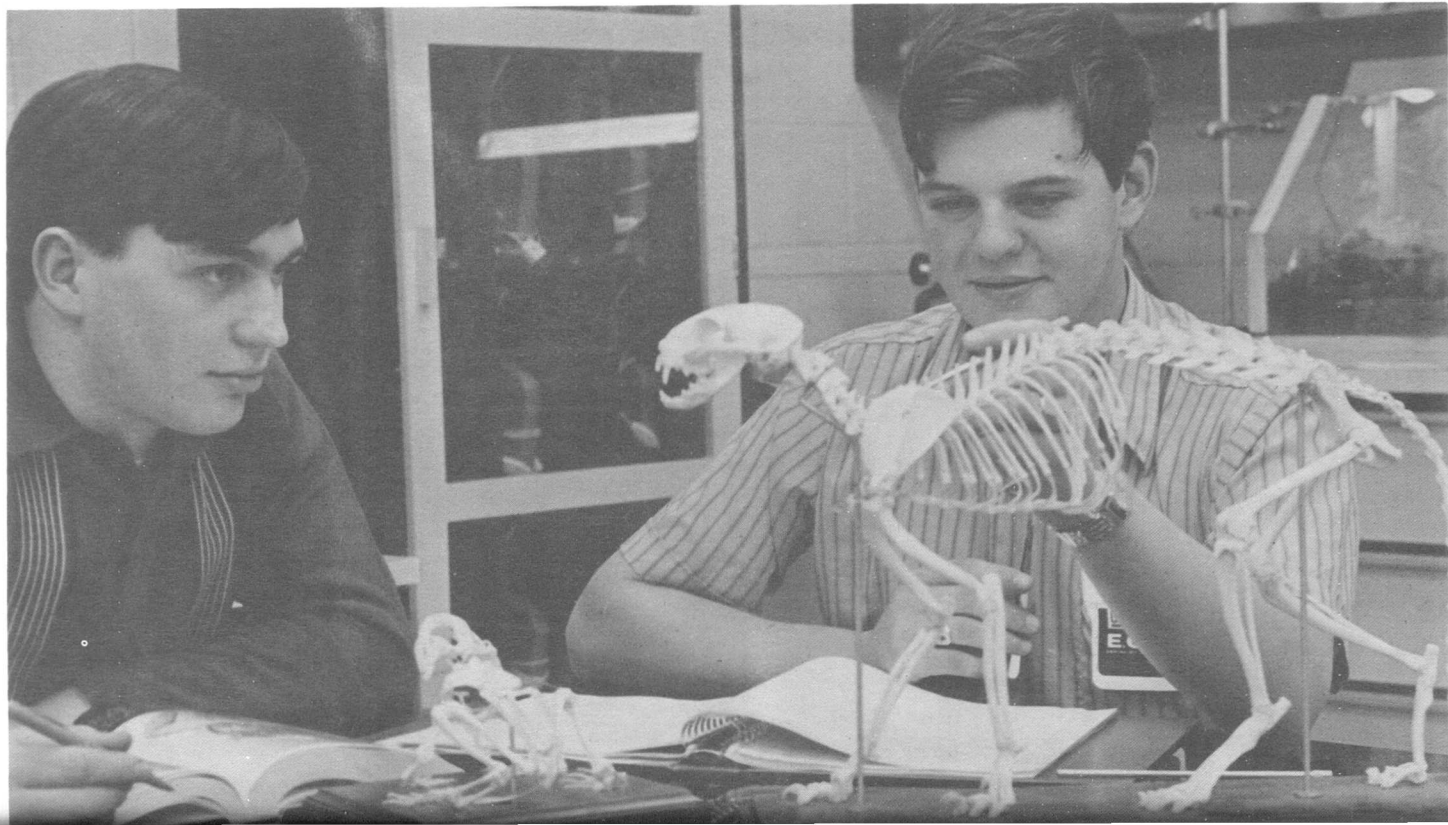
**Express and Freight:**

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

**College Colors:**

Royal Blue and Regular Gold.





## Churches:

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

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

## Canada Student Loans Plan

The government of Canada makes available to students enrolled in the Degree and Technician Courses loans up to \$1000. 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 for the Nova Scotians are available at the Department of Education, Box 578, Halifax, N. S. Residents of other provinces should apply to the issuing authority at their provincial capital.

# 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.

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

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

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

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

Tampering with any fire protection equipment is forbidden.

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 Residence.

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

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

## RESIDENCE REGULATIONS

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

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

Students will be required to provide their own towels, soap and drinking glass. Sheets, pillows, 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 Residence.

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

Details of dress regulations will be given in the Student Handbook.



## 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 within two months after the closing of the college year.

## 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,
  - (c) behind Cumming Hall.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 un-

registered 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.

### REGISTRATION DEPOSIT

All unmarried male students except those living at home will be required to live in one of the College dormitories unless special permission to live out has been granted through the Registrar's office.

Students for whom a room has been reserved in a dormitory are required to pay a deposit of \$25.00, returning students before June 30 and new students as soon as they are asked for it.

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.

### MEDICAL EXAMINATION

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

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

### CONTAGIOUS OR INFECTIVE DISEASES

Students on holiday or accepted candidates for admission

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

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

### 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

The Students' Council each year appoints a Social Committee which directs the social activities of the College. Informal dances are held at regular intervals. These dances are

planned and supervised by the Social Committee and two or more members of the Faculty.

The churches of the Town of Truro are very friendly and extend a welcome to all students attending the Agricultural College. The churches entertain the student body on many occasions during the college year and at these functions pleasant associations are formed under very desirable auspices.

### DEBATING SOCIETY

The Students' Debating Society conducts a series of inter-class debates. The champions are awarded the Nova Scotia Department of Agriculture and Marketing debating trophy. The activities of the Society are a valuable supplement to the weekly public speaking classes.

### ATHLETICS

The athletic program involves the following:

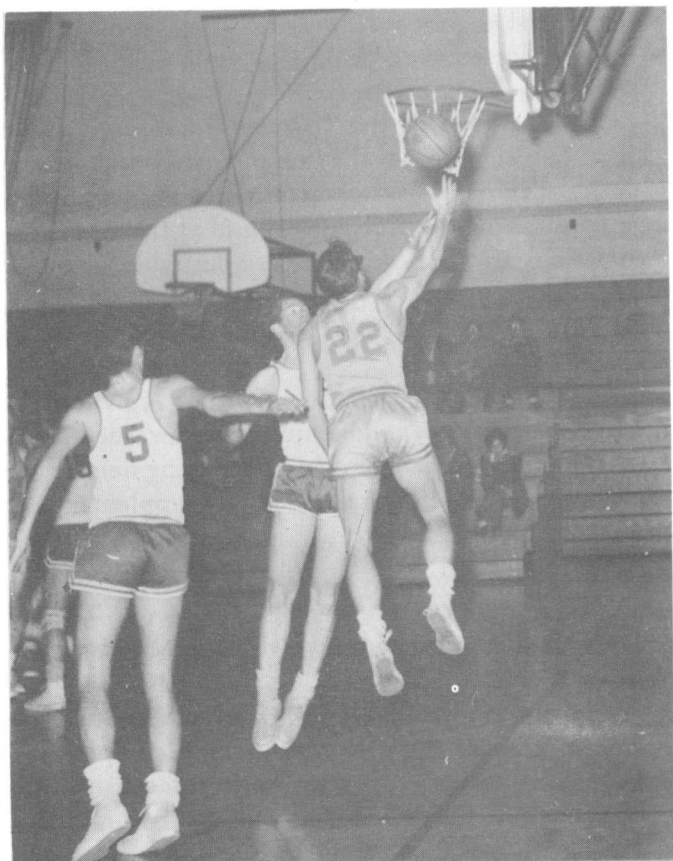
(a) Intramural athletics. The intramural program continues throughout the year with units of competition formed on a class basis. A variety of sports is offered including softball, soccer, hockey, basketball, and volleyball.

(b) Interscholastic athletics. The college is represented in the Nova Scotia Colleges Conference, a seven team athletic conference which directs interschool competition in soccer, basketball, and hockey. The college also competes on an interschool basis in the Woodsmen's Competition.

(c) Physical education. This is a program of "education through the physical".

### ATHLETIC REGULATIONS

All students are eligible to play for teams representing the College, subject to the following exceptions:



- (a) No student who has failed in more than one subject will be allowed to play on more than one team representing the college.
- (b) No student who has more than two failures will be allowed to play on any team representing the College, excepting at the discretion of the Faculty Committee on Athletics and the individual coach concerned.

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.

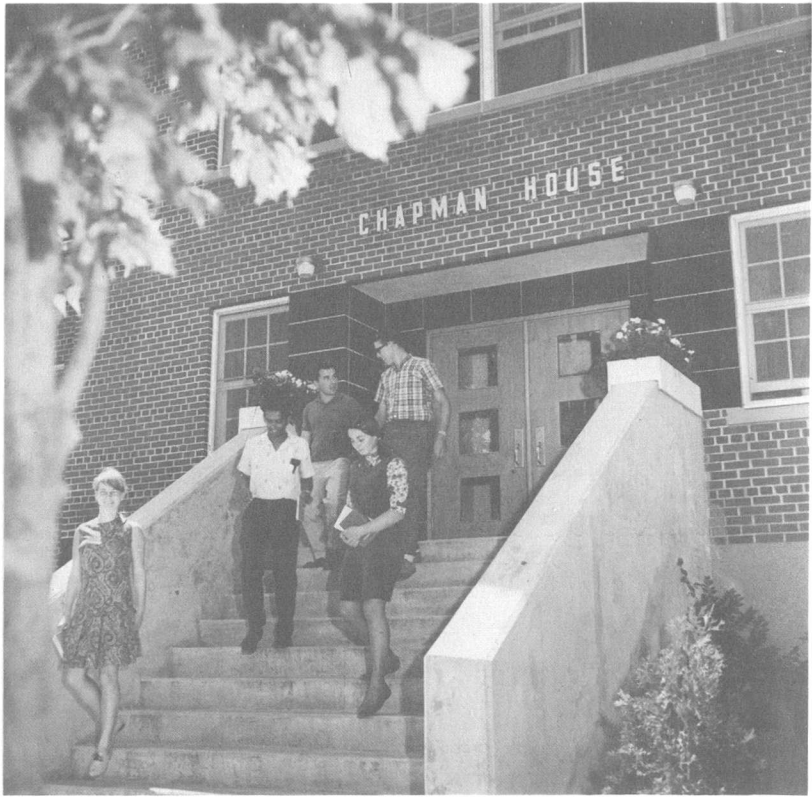
Students who lose time from classes due to participating in outside games will not receive an attendance credit for the time lost.

## 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 used in the exhibition.

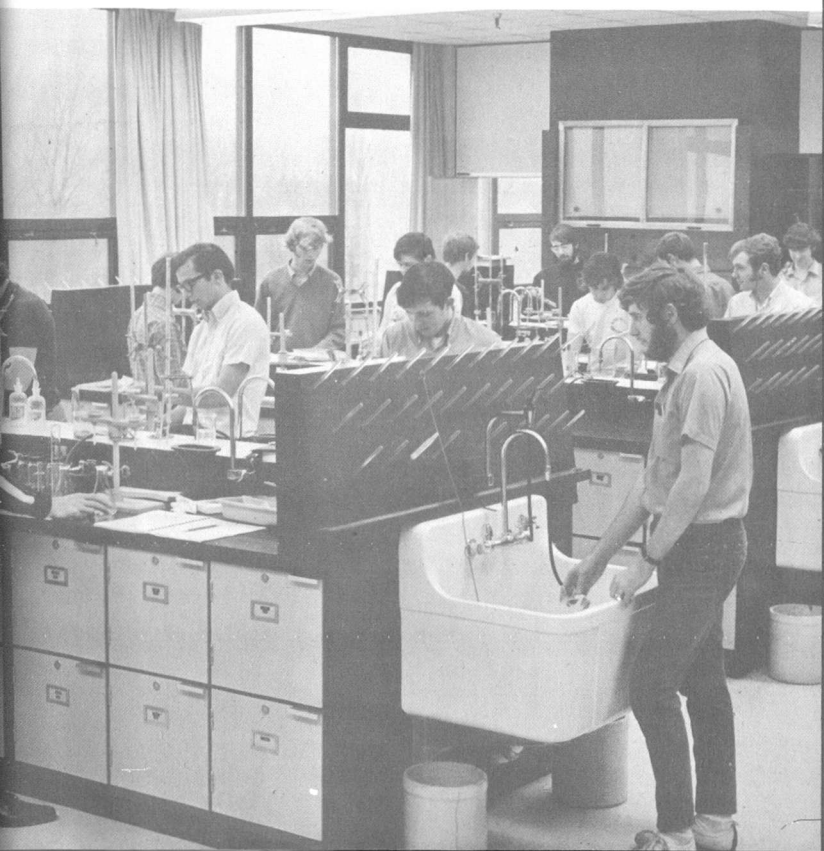
In addition to livestock classes, the show also features competition in Agronomy, Horticulture and Farm Management and a series of educational demonstration booths.

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





DEGREE  
COURSES



## DEGREE COURSES

The Nova Scotia Agricultural College is a junior College offering three years in advance of junior matriculation and two years in advance of senior matriculation in a course leading to a bachelor's degree in Agriculture and three years in advance of senior matriculation in a five year course leading to a bachelor's degree in Engineering (with specialization in Agricultural Engineering). Most of its graduates complete their courses at Macdonald College of McGill University, where they are admitted to the fourth year of a five year course in advance of junior matriculation, or at the University of Guelph, where they are admitted to the third year of a four year course in advance of senior matriculation; its graduates who are candidates for a degree in Engineering complete their courses at the Nova Scotia Technical College, where they are admitted to the second last year. A limited number of graduates will be admitted to the third year of a four year course at the University of Maine.

Qualified graduates may be considered for admission to the four year course in veterinary medicine offered by the Ontario Veterinary College of the University of Guelph.

The following options are offered to students in their last two years at Macdonald College:

Agricultural Chemistry, Agricultural Commerce, Agricultural Economics, Agricultural Engineering, Agronomy, Animal Science, Botany, Food Management, General Agricultural Science, Horticulture, Microbiology, Plant Pathology, Soil Science and Zoological Science.

The University of Guelph offers the following agricultural majors to students in the last two years:

Apiculture, Entomology, Microbiology, Agricultural Economics and Business, Animal Science, Poultry Science, Dairy Science, Landscape Horticulture, Crop Science, Horticulture, Plant Protection, Chemistry, General Sci-

ence, Wildlife and Fisheries, Land Management and Soil Science.

The University of Maine offers the following agricultural majors to students in the last two years:

Biological Sciences, Agricultural Resource Economics, Agricultural Engineering (jointly with the College of Technology), Agricultural Mechanization, Animal and Veterinary Science, Bacteriology, Biochemistry, Biology, Botany, Entomology, Plant and Soil Science, and Wildlife Management.

### THE COLLEGE DIPLOMA

Students who complete the prescribed number of courses with no mark below 50 per cent of the maximum mark obtainable and who are in good standing will be awarded a Degree Course Diploma. The diploma confers upon recipients the status of "Associate 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 in the second and third years and an honours diploma to one who has attained an average of at least seventy-five per cent in the second and third years. (Biology 120 will not be taken into consideration as a second year subject.)

### ENTRANCE REQUIREMENTS

All candidates for admission must:

- (a) be sixteen years of age on or before the opening day of the College year;
- (b) be of good moral character;
- (c) present a satisfactory medical certificate dated no more than 30 days previous to registration;
- (d) present an acceptable certificate of one of the following:

(Nova Scotia—Grade XI,  
New Brunswick—Grade XII,  
Prince Edward Island—Grade XII,  
Newfoundland—Grade XI)

with no mark of less than 50 per cent of the maximum mark obtainable and an average of at least 60 per cent in:

- (a) English (two papers), Algebra and Geometry;
- (b) two of Chemistry, Physics or Biology;
- (c) one additional academic subject.

(see regulations governing admission with advanced standing)

\*Where possible, the student should elect Physics and Chemistry. Applicants should understand that possession of the minimum entrance qualifications will not necessarily guarantee admission.

A candidate for admission to the course leading to a bachelor's degree in Agricultural Engineering must, in addition, obtain standing with an average of at least 60 per cent with no mark below 50 per cent in five senior matriculation subjects of which two must be Chemistry and Mathematics (including Algebra).

In 1972 and thereafter a candidate who has not written provincial examinations on the work of the matriculating year will be considered on the basis of his school record in that year, a recommendation from the school Principal, and the results of SACU or similar tests.

In 1971, the results of SACU or similar tests will not be required. A candidate who has taken tests of this type should however submit the results.

## ADMISSION WITH ADVANCED STANDING TO THE COURSE IN AGRICULTURAL SCIENCE

(a) Nova Scotia: A candidate who has completed the Grade XI entrance requirements and who submits a Grade XII provincial transcript with marks of at least 65% in English, Mathematics, and Chemistry and with an average of at least 65% on those subjects, a second science and one additional subject will be admitted to the second year. If the second science is Grade XII Biology and the mark is at least 65%, full credit will be given for the first year. If Biology is not offered or if the mark is not up to the required standard, Biology 120 will have to be taken along with the work of the second year.

(b) New Brunswick: A candidate who has attained marks of at least 65% on the provincial examinations in English 122, Mathematics 122, Chemistry 122 and an average of at least 65% on those subjects and a second science and one additional subject at the 122 level will be admitted to the second year. If the second science is Biology 122 and the mark is at least 65%, full credit will be given for the first year. If Biology is not offered or the mark is not up to the required standard, Biology 120 will have to be taken along with the work of the second year.

### SUPPLEMENTAL EXAMINATIONS

A student who fails in more than half of the total number of full courses of an academic year or who attains an average of less than fifty per cent on the work of an academic year may not write supplemental examinations. A term course is rated as half a course.

Provided that the disqualifying conditions stated above are not applicable, a student who makes between thirty per cent and forty-nine per cent in any subject may write a supplemental examination. Supplemental examinations will be written at the end of June and just before registration day in September. A maximum of two supplemental examinations will be permitted in any subject. No supplemental examination will be permitted

in any subject after two years have elapsed following the original failure.

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 the first supplemental examination will be \$5.00. Should a second examination be necessary, the fee will be \$10.00. No supplemental examination is to be written until the required fee has been paid. 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. per examination.

## SYLLABUS

### AGRICULTURAL SCIENCE

(leading to a Bachelor of Science degree in Agriculture)

#### FIRST YEAR

	First Lec.	Term Lab.	Second Lec.	Term Lab.
Biology 100 . . . . .	3	4	3	4
Chemistry 100 . . . . .	3	4	3	4
English 100 . . . . .	4		4	
History 100 . . . . .	3		3	
or				
Sociology 110 . . . . .	3			
and				
Sociology 120			3	
Mathematics 100 . . . . .	3		3	
Physical Education (Elective program to be arranged)				

## SECOND YEAR

	First Lec.	Term Lab.	Second Lec.	Term Lab.
Biology 120 . . . . .			3	4
Biology 210 . . . . .	3	4		
Biology 220 . . . . .			3	4
Chemistry 200 . . . . .	3	4	3	4
Economics 200 . . . . .	3		3	
History 210 . . . . .	2			
Mathematics 200 . . . . .	3		3	
Physics 200 . . . . .	3	4	3	4

\*Offered to students who enter with advanced standing.

## THIRD YEAR

	First Lec.	Term Lab.	Second Lec.	Term Lab.
Animal Science 320 . . . . .			3	2
Biology 310 . . . . .	2	2		
Biology 311 . . . . .	3	2		
Biology 321 . . . . .			3	2
Chemistry 300 . . . . .	3	4	3	4
Economics 320 . . . . .			3	
Mathematics 320 . . . . .			3	
Plant Science 310 . . . . .	3	1		
Soil Science 310 . . . . .	3	2		
Biology 320 . . . . .			3	2
or				
Mathematics 321 . . . . .			3	

### THIRD YEAR

(leading to a Bachelor of Science degree in Agriculture with a major in Agricultural Economics or Commerce)

	First Lec.	Term Lab.	Second Lec.	Term Lab.
Accounting 100 . . . . .	2	2	3	
Animal Science 320 . . . . .			3	2
Economics 300 . . . . .	2	4	2	2
Economics 321 . . . . .			3	
Economics 320 . . . . .			3	
Extension Methods 310 . . . . .	2	2		
Mathematics 321 . . . . .			3	
Plant Science 310 . . . . .	3	1		
Soil Science 310 . . . . .	3	2		

### AGRICULTURAL ENGINEERING

(leading to the degree of Bachelor of Engineering)

#### FIRST YEAR

Biology 100	3	4	3	4
Chemistry 201	2	4	2	4
Economics 200	3		3	
English 100	4		4	
Mathematics 200	3		3	
Physics 100	3	4	3	4
Physical Education (Elective program to be arranged)				



## SECOND YEAR

Animal Science 320			3	2
Biology 321			3	2
Engineering 200		4		4
Engineering 201	2	1	2	1
Engineering 210	2	2		
Engineering 211	1	2		
Engineering 220			2	2
Mathematics 201	3		3	
Physics 201	3	4	3	4
Plant Science 311	2	2		

## THIRD YEAR

Economics 320			3	
Engineering 300	2	1	2	1
Engineering 301	2	1	2	1
Engineering 310	2	2		
Engineering 320			2	2
Mathematics 300	3		3	
Mathematics 320			3	
Physics 300	2	2	2	2
Soil Science 310	3	2		

## DESCRIPTION OF COURSES

The following courses are arranged for the 1971-72 academic year. The Faculty reserves the right to make any revisions or additions which may be necessary.

## ANIMAL SCIENCE

### 320: Introductory Animal Science

An introductory course to animal husbandry production outlining general areas and populations of farm livestock past and present, with a general view of the future possibilities. The several breeds of domestic farm animals are discussed as to origin, breeding principles, selection programs, management practices, nutritional standards, disease control, housing requirements and general principles required for economic production of farm livestock.

Animal Husbandry in this course includes the larger domestic farm animals and poultry.

3rd year, 2nd term—3 lecs. and 2 labs. per week.

## BIOLOGY

### 100: General Biology

An introduction to the biology of higher plants and animals, with a brief description of the animal kingdom. This will treat the cell, tissues, organs, systems, organisms and societies; give an introduction to their structure, organization, metabolism, nutrition, growth and reproduction; and consider ecology and evolution. The first term is primarily botany and the second term is zoology.

1st year, both terms—3 lecs. and 4 labs. per week.

Texts: Wilson and Loomis, BOTANY; Swanson, THE CELL; Storer and Usinger, GENERAL ZOOLOGY.

### 120: Basic Biology

Basic biological concepts are explored in order to give the student an understanding of the organization and operation of biological systems. Energy requirements, acquisition, utilization

and transfer, co-ordination of activities, reproduction, genetics and evolution are among the topics covered. The course is designed for students entering at the second-year level.

2nd year, 2nd term—3 lecs. and 4 labs. per week.

Texts: Nelson, Robinson and Boolootien, FUNDAMENTAL CONCEPTS OF BIOLOGY. Nelson and Latina, EXPERIMENTS IN FUNDAMENTAL CONCEPTS OF BIOLOGY.

### 210: Zoology—The Animal Kingdom

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

2nd year, 1st term—3 lecs. and 4 labs. per week.

Text: Storer and Usinger; GENERAL ZOOLOGY, 4th Edition.

### 220: Botany—The plant kingdom

A review of the plant kingdom considering the classification of plants and a study of the biology, morphology and life cycles of representatives of the algae, fungi, bryophytes and tracheophytes. Special attention will be given to the fungi, with the elements of plant pathology; and an introduction to the comparative morphology, classification and distribution of the angiosperms is included.

2nd year, 2nd term—3 lecs. and 4 labs. per week.

Text: Wilson and Loomis, BOTANY.

### 310: Introduction to Genetics (Prerequisite—Biology 100 or Biology 120).

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

3rd year, 1st term—2 lecs. and 2 labs. per week.

Text: Strickberger, GENETICS

### 321: Microbiology (prerequisite—Biology 100 or Biology 120)

General introduction to microbiology; principles of morphology and physiology; relation of micro-organisms to fermentations, water, sewage, soil, dairy products, food and disease.

3rd year, 2nd term—3 lecs. and 2 labs. per week.

Reference Texts: Carpenter, MICROBIOLOGY; Umbreit, MODERN MICROBIOLOGY; Stanier, Doudorf and Adelberg, THE MICROBIAL WORLD.

### 320: Advanced Genetics (Prerequisite—Biology 310)

A detailed study of the genetic material, gene action and population genetics with emphasis on agricultural applications of genetic knowledge.

3rd year, 2nd term—3 lecs. and 2 labs. per week.

Texts: Strickberger, GENETICS; Brewbaker, AGRICULTURAL GENETICS.

### 311: Cell Physiology

Functional organization of the cell, cell environment, exchange across membranes, conversion of energy and matter, irritability, growth and division.

3rd year, 1st term—3 lecs. and 2 labs. per week.

Reference Text: Giese, CELL PHYSIOLOGY.

## CHEMISTRY

### 100: Principles of Chemistry

A course combining lecture and laboratory periods to give the student a sound background and training in chemical principles and laboratory practice.

A modern approach is used to familiarize the student with the theories and laws governing atomic structure, relating bonding, periodicity of the elements, chemical reactions and geometrical form of molecules. Chemical equilibrium, reaction rates; complex ions and an introduction to organic chemistry are subjects studied in the second semester of this course.

The laboratory work is mainly quantitative in its approach with an introduction to qualitative analysis as an aid to solution chemistry involving a short period in the laboratory schedule. The laboratory work is correlated with lecture material to assist the student in relating theory and practice.

1st year, both terms—3 lecs. and 4 labs. per week.

Text: Masterson and Slowinski, Chemical Principles.

Laboratory manual—To be selected.

## 200: Organic Chemistry (Prerequisite—Chemistry 100)

A lecture and laboratory course designed to give the student an appreciation of and an introduction to Organic Chemistry. Introduction to a number of important basic classes of organic compounds including the alkanes, alkenes, alkynes, petroleum and petrochemicals, cycloparaffins, alcohols, aldehydes, ketones, alkylhalides, monocarboxylic acids, acid halides, acid anhydrides, salts, amides, ethers, amines, aromatics and aromatic derivatives, heterocyclics, etc. Introduction to reaction mechanisms and reaction intermediates.

An introduction to Biochemistry including optical activity, carbohydrates, lipids (fats and oils), amino acids and proteins, etc.

Laboratory work including the preparation, isolation, purification and study of a number of important "organics" discussed in lecture and emphasizing material and teaching with techniques, skills and philosophies involved in carrying out experimental work in Organic Chemistry.

2nd year, both terms—3 lecs. and 4 labs. per week.

Text: Morrison and Boyd, ORGANIC CHEMISTRY, (2nd edition).

Laboratory Manual: Mimeographed.

Suggested Reference Books: Roberts and Caserio, MODERN ORGANIC CHEMISTRY; West and Todd, TEXTBOOK



OF BIOCHEMISTRY, (4th edition); Noller, CHEMISTRY OF ORGANIC COMPOUNDS (3rd edition); Banks, NAMING ORGANIC COMPOUNDS (Programmed), 1967; Henderson, et al, PROBLEMS IN ORGANIC CHEMISTRY, 1968; Bonner and Castro, ESSENTIALS OF MODERN ORGANIC CHEMISTRY, (1st edition); Runquist, ORGANIC CHEMISTRY—NOMENCLATURE (Programmed).

## 201: Organic-Biochemistry

A lecture and laboratory course designed to cover the basic principles of general organic and biochemistry.

Intended for first year engineering students, the course covers such topics as atomic structure, chemical bonding, radioactivity, reactions and reaction rates, electrochemical processes, important classes of organic compounds and reactions and the metabolism of carbohydrates, fats and proteins. Practical applications of theory are related to corrosion, nuclear energy, pollution, fuels, plastics, etc. in lecture and laboratory material.

1st year, both terms – 2 lecs. and 4 labs. per week.

Text: Routh, Eyman, Burton, ESSENTIALS OF GENERAL, ORGANIC AND BIOCHEMISTRY, 1969.

Laboratory Manual – Selected Mimeographed Experiments

## 300: Introductory Biochemistry (Prerequisite—Chemistry 200)

This is a lecture and laboratory course which uses modern concepts and methods to give the student an appreciation of the composition and function of important biological compounds. First term work deals with carbohydrates, lipids, amino acids, proteins, nuclear acids and enzymes. Second term work includes digestion and absorption and intermediary metabolism in plants, animals and microorganisms.

The laboratory portion of the course introduces students to modern techniques and instruments used in biochemical studies.

3rd year, both terms—3 lecs. and 4 labs. per week.

Text: West and Todd, TEXTBOOK OF BIOCHEMISTRY  
Laboratory—EXPERIMENTAL BIOCHEMISTRY, J. M. Clark, Jr.

## ECONOMICS

### Accounting 100

Basic accounting procedures are stressed. Actual project work with farm and farm related business records helps the student to better understand inventories, assets, liabilities, owner's equity, changes in owner's equity, working capital, record book organization, preparing monthly statements, and closing the books. Accounting techniques for several forms of business organizations are examined. Some time is devoted to banking procedures and payroll bookkeeping.

The interpreting of financial records for income tax and Canada Pension plan purposes is covered. By making comparisons of actual balance sheets, the financial structure, variations in current position, and several trends are identified. The importance of records for management decisions is stressed.

1st term—2 lecs. and 2 labs. per week

2nd term—3 lecs. per week.

### 200: Principles of Economics

An introduction to the study of Economics. The course is designed to acquaint the student with the main elements of economic theory; and more importantly their application in our society today. The course covers, from an historical base, the main topics of Economic Growth, National Income Analysis, Money and Banking, The Price System, International Trade, and Development Economics. A major portion of class time is spent in free discussion.

2nd year, both terms—3 lecs. per week

Text: Heilbroner, THE ECONOMIC PROBLEM

### 310: Extension Methods

A discussion course in rural sociology, program development, leadership training and group dynamics.

3rd year, 1st term—2 lecs. and 2 labs. per week.



### 320: Economics of Agriculture (Prerequisite—Economics 200)

A study of the Canadian Farm Industry; the financial returns in Canadian Agriculture; a study of Agricultural Development and Policies affecting development. The relation between Agriculture and Canadian Industries. Attention will be given to an analysis of the economic development of Atlantic provinces Agriculture.

3rd year, 2nd term—3 lecs. per week.

Text to be assigned.

### 321: Economics of Marketing

The nature and importance of agricultural marketing; markets and market prices; market structures; marketing margins and efficiency; marketing organizations; federal and provincial jurisdiction and policies; the marketing of Canada's principal farm products.

3rd year, 2nd term—3 lecs. per week.

### Economics 300

The principles and methods of analyzing and organizing farm and farm related businesses are examined. Practical problems associated with size of business, balance in organization, labor efficiency, and production systems are assigned to the students. Some time is spent in budgeting and production planning.

Various sources of capital and the techniques of managing each category of credit are studied. The effect of capital limitations on business organization also is examined.

1st term—2 lecs. and 4 labs. per week.

2nd term—2 lecs. and 2 labs. per week.

## ENGINEERING

### 200: Graphics

A course to develop skills in free hand and instrument drawing in orthographic projection, in perspective and mapping. Also descriptive geometry including rectangular projection on two and three planes, elements of axiometric central and topographic projections.

2nd year, both terms—4 labs. per week.

Text: French and Vierck, GRAPHIC SCIENCE.

### 201: Statics

This course deals with a study of forces, force components, moments and couples due to force systems in two and three dimensions. Centroids, centers of gravity and moments of inertia are determined for lines, areas and bodies. Friction and methods of virtual work are also included. Analytical, vector and graphical solution methods are used.

2nd year, both terms—2 lecs. and 1 lab. per week.

Text: Higdon and Stiles, ENGINEERING MECHANICS, VOLUME 1, VECTOR EDITION'

### 210: Farm Structures.

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.

2nd year, 1st term—2 lecs. and 2 labs. per week.

Reference text: FARM BUILDING STANDARDS.

### 211: Farm Mechanization.

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 management systems will be investigated.

2nd year, 1st term—1 lec. and 2 labs. per week.

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

Reference Text: Smith, FARM MACHINERY AND EQUIPMENT.

### 220: Surveying.

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

2nd year, 2nd term—2 lecs. and 2 labs. per week.

(may require up to a week after exams in field exercises depending on weather during the term.)

Text: KISSAM, SURVEYING PRACTICE.

### 300: Strength of Materials (Prerequisite—Engineering 201).

The course includes a preliminary introduction to engineering materials, their properties and quality standards. The main course of study includes an analytic treatment of stress-strain relationships for tension, compression, shear and combined stresses, shear bending moment, slope and deflection and stresses in beams, torsion in shafts, statically indeterminate beams and columns.

3rd year, both terms—2 lecs. and 1 lab. per week.

Text: Higdon, Ohlsen, Stiles and Weese, MECHANICS OF MATERIALS.

### 301: Dynamics

A study of the principles of engineering dynamics as related to the kinematics and kinetics of particles and rigid

bodies in rectilinear, curvilinear and harmonic motion. Work and energy, impulse and momentum and simple vibrations are introduced. Analytical, graphical and vector methods are used.

3rd year, both terms—2 lecs. and 1 lab. per week.

Text: Higdon & Stiles, ENGINEERING MECHANICS, Vol. 2, Dynamics.

### 310: Fluid Mechanics—(Prerequisite Mathematics 200)

A study of physical properties of liquids and gases, fluid statics and fluid flow including pressure, manometry, hydrostatic forces, stream lines and tubes, continuity, momentum, Bernoulli equation, flow measurement, friction and Reynolds number.

3rd year, 1st term—2 lecs. and 2 labs. per week.

Text: Eskinazi, PRINCIPLES OF FLUID MECHANICS.

### 320: Thermodynamics—(Prerequisite—Mathematics 200, Physics 200).

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.

3rd year, 2nd term—2 lecs. and 2 labs. per week.

Texts: Durham, THERMODYNAMICS, (Second Edition); Mark, THERMODYNAMICS.

## ENGLISH

### 100: Introduction to Literature

Reading and discussion of selected works of Canadian, British, American and European writers; introduction to research and scholarly writing; public speaking.

1st year, both terms—4 lecs. per week.

Texts: Clark and others (eds), ENGLISH LITERATURE: A COLLEGE ANTHOLOGY; Emery and Kierzek, ENGLISH FUNDAMENTALS (4th edition, Form C); Frisby, THE CONDUCT OF A PUBLIC MEETING; Haliburton, THE CLOCK-MAKER; Hardwick, FIFTH BOOK OF VOCABULARY IMPROVEMENT; Leacock, LITERARY LAPSES and SUNSHINE SKETCHES; Raddall, AT THE TIDE'S TURN and THE NYMPH AND THE LAMP; MacLennan, EACH MAN'S SON and BAROMETER RISING; Richler, THE APPRENTICESHIP OF DUDDY KRAVITZ; Huxley, A BRAVE NEW WORLD; Mann, CONFESSIONS OF FELIX KNOLL; Hemingway, THE SUN ALSO RISES; Shakespeare, HAMLET.  
Summer reading recommended.

## HISTORY

### 100: Canadian History

Emphasis on constitutional and economic aspects.

1st year, both terms—3 lecs. per week.

Text: Morton, THE KINGDOM OF CANADA

### 210: History of Agriculture

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.

2nd year, 1st term — 2 lecs. per week.

## MATHEMATICS

### 100: Algebra and Trigonometry

Systems of real numbers, including absolute values, inequalities, exponents and rational exponents; functions—cartesian coordinates, graphs of functions and equations, variation;

exponential and logarithmic functions—their graphs equations and computation; trigonometric functions, formulas and identities; complex numbers; theory of equations, factoring polynomials, remainder and factor theorems, finding zeroes; systems of equations, including matrices; permutations, combinations, binomial theorem; sequences; and mathematical induction.

1st year, both terms—3 lecs. per week.

Text: Fisher and Ziebur, INTEGRATED ALGEBRA AND TRIGONOMETRY (Second Edition).

**200: Calculus and Analytic Geometry** (Prerequisite—Mathematics 100.)

The straight line, the ellipse, the parabola and the hyperbola; a study of limit and the derivative with applications to maxima and minima, velocity and acceleration; differentiation of the trigonometric, exponential and logarithmic function in detail; curvature; the mean value theorem; integration techniques; and the definite integral with applications to areas, volumes, length of arc, hydrostatic pressure, work, moments and centroid.

2nd year, both terms—3 lecs. per week.

Text: Goodman, ANALYTIC GEOMETRY AND THE CALCULUS.

**201: Advanced Calculus** —(Prerequisite—Mathematics 200)

Infinite series, plane curves, vectors and polar coordinates, three-dimensional analytic geometry, differential calculus of functions of several variables, multiple integration, an introduction to computer programming and numerical methods.

2nd year, both terms — 3 lecs. per week.

Text: Johnson and Kiokemeister, CALCULUS WITH ANALYTIC GEOMETRY

### 300: Differential Equations and Related Topics

First and second order linear equations, series solution, Laplace Transforms, systems of equations, numerical methods, Fourier series, introduction to complex variables.

3rd year, both terms – 3 lecs. per week

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

### 320: Statistics and Agricultural Experimentation (Prerequisite –Mathematics 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, factorial and split-plot designs.

3rd year, 2nd term–3 lecs. per week.

Text: Charles M. Woolf, PRINCIPLES OF BIOMETRY

### 321: Advanced Calculus (Prerequisite–Mathematics 200.)

Partial differentiation, line and multiple integrals, Taylor's series and Fourier series, ordinary differential equations.

3rd year, 2nd term–3 lecs. per week.

Texts: Protter and Morrey, COLLEGE CALCULUS WITH ANALYTIC GEOMETRY; Kells, DIFFERENTIAL EQUATIONS.

## PHYSICAL EDUCATION

Education through physical activity. A program enabling the student to develop knowledge and skill in a variety of activities. Improved motor fitness is a major objective. Social and emotional development are desirable ends which will

accompany physical development.

1st year, both terms – (Elective program to be arranged)

## PHYSICS

### 100: Introductory Physics

An introductory course for engineers covering mechanics, heat, light, sound, electricity and magnetism. Development of the basic theories of physics with practical applications in solving numerical examples. Emphasis on the experimental foundations of physics in laboratory exercises designed to give students an appreciation of the scientific method and to permit them to demonstrate and study physics phenomena for themselves.

1st year, both terms—3 lecs. and 4 labs. per week.

Text: Smith & Cooper, ELEMENTS OF PHYSICS.

### 200: Introductory Physics (Prerequisite—Mathematics 100)

An introductory course for non-engineering students, covering mechanics, heat, light, sound, electricity and magnetism. Development of the basic principles of physics with practical applications in solving numerical examples. Emphasis on the experimental foundations of physics through laboratory exercises designed to teach basic techniques in physical measurement, and to permit students to study phenomena for themselves.

2nd year, both terms—3 lecs. and 4 labs. per week.

Text: Shortley and Williams, PRINCIPLES OF COLLEGE PHYSICS, SECOND EDITION.

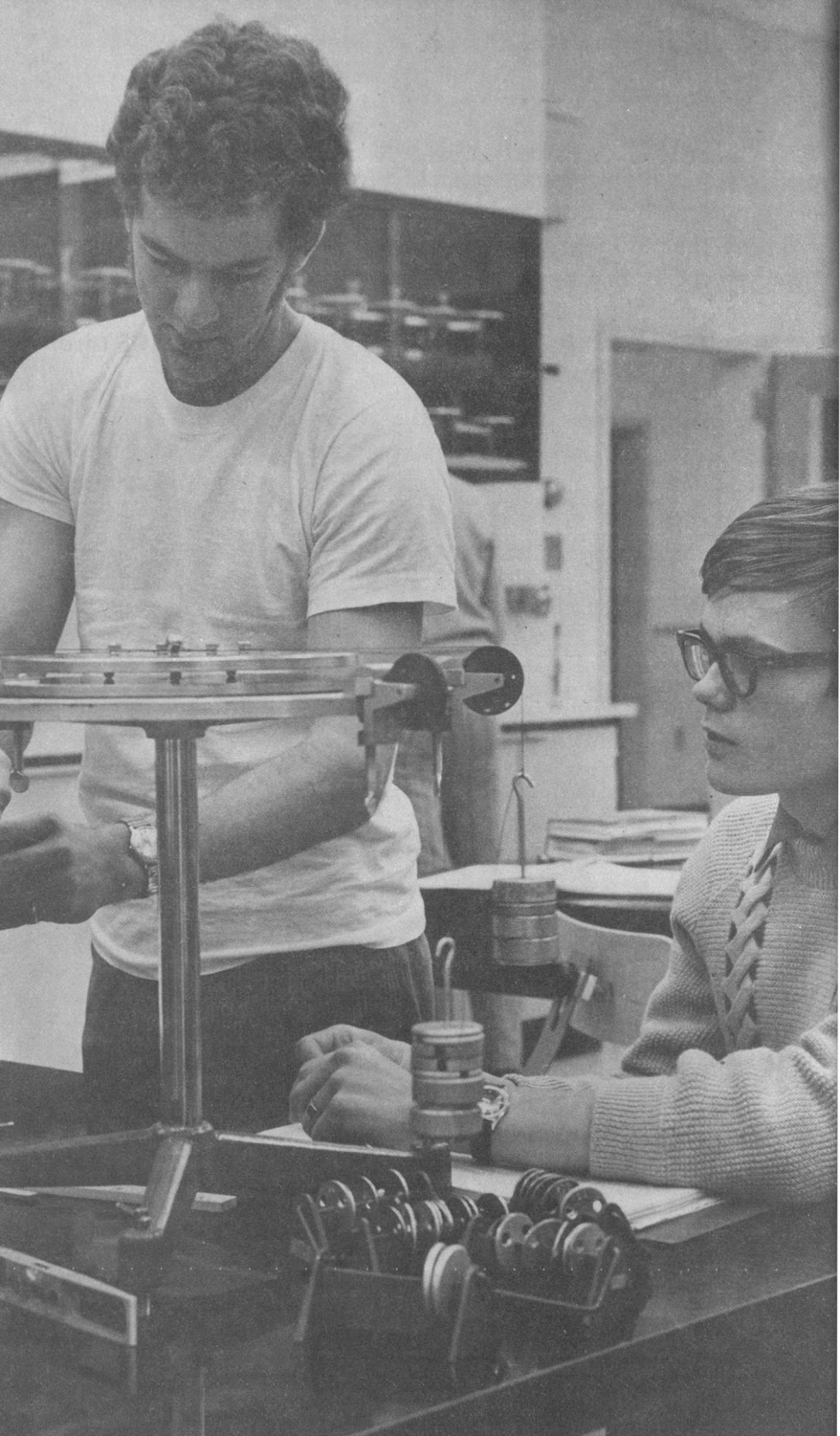
### 201: Engineering Physics—(Prerequisites—Physics 100, and registration in Mathematics 200)



A course for second year engineering students covering principles of mechanics—statics, kinematics, and dynamics; principles of hydrodynamics, thermodynamics. Use is made of calculus that students are studying to solve physical problems. Selected topics in atomic and nuclear physics.

2nd year, both terms—3 lecs. and 4 labs. per week.

Text: Sears and Zemansky, UNIVERSITY PHYSICS (3rd. edition).



### 300: Electric Circuits (Prerequisite-Mathematics 200)

General principles of electric fields, potential capacitance, magnetic fields and electromagnetic induction. A large portion of the course deals with the analysis of electric circuits, both dc and ac.

This course is primarily for engineers, but may be elected by others interested, upon approval.

3rd. year, both terms - 2 lecs. and 2 labs. per week. Text: Halliday and Resnick, PHYSICS PART II. Edminister, ELECTRIC CIRCUITS (Schaum).

## PLANT SCIENCE

### 310: Introduction to Plant Science

General principles underlying the improvement, culture and utilization of horticultural and field crop plants. Special attention will be given to the use of plants as the basic food resource of man.

3rd year, 1st term—3 lecs. and 1 lab. per week.

Text: Janick, Scherg, Woods and Ruttan, PLANT SCIENCE, AN INTRODUCTION TO WORLD CROPS.

### 311: General Plant Science

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 seeding, cultivation and harvesting of these crops.

3rd year, 1st term—2 lecs. and 2 labs. per week.

Text: Martin and Leonard, PRINCIPLES OF FIELD CROP PRODUCTION.

## SOCIOLOGY

**110:**

An understanding of individuals, their society, and the world in which they live will be given. In this introductory course, several basic sociological concepts will be introduced, specific subcultures examined and some community structure identified. A major part of the course will be a comprehensive analysis of the student's home community.

1st year, first term — 3 lecs. per week.

Texts: Shinn, R., *THE TANGLED WORLD*; Berton, P., *THE SMUG MINORITY*; Berger, P., *INVITATION TO SOCIOLOGY*; Frankl, V., *MAN'S SEARCH FOR MEANING*; and other assigned readings.

**120:**

A comprehensive study of community structure, and several other group relationships will be made. The relationships between technology, environment, and human values, morals and decision making are considered.

1st year, second term — 3 leacs. per week

Texts: Shinn, R., *THE TANGLED WORLD*; Berton, P., *THE SMUG MINORITY*; Berger, P., *INVITAION TO SOCIOLOGY*; Frankl, V., *MAN'S SEARCH FOR MEANING*; and other assigned readings.

## SOIL SCIENCE

**310: Introduction to Soil Science**

An introductory course dealing with the general principles of soil science, including origin, development and classification of soils, their chemical and physical characteristics as related to crop production and plant nutrition, soil conservation and land use. 3rd year, 1st term—3 lecs. and 2 labs per week.

Reference Texts: Buckman and Brady, *THE NATURE AND PROPERTIES OF SOILS* (7th edition); Bauer, *SOIL PHYSICS*; Emmons, Allison, Stauffer and Thiel, *GEOLOGY*; Laboratory Manual: Prepared Sheets and Project work.

TECHNICIAN  
AND TECHNOLOGY  
COURSES



## TECHNICAL 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 and Diplomas of Technology.

### I. TECHNICIAN COURSES

#### Entrance Requirements

All candidates for admission must:

(a) be eighteen years of age, on or before the opening day of the College year;

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

(c) present evidence for the following academic pre-requisites that refer to the candidate's home province.

- (i) Nova Scotia:  
Grade XI (University Prep.) including English, Mathematics, 1 Science, and 2 other subjects. Students with Grade XII marks above 60% in English, Mathematics, Biology or Chemistry may ask for credit in corresponding subjects.
- (ii) New Brunswick:  
Grade XII. The high school program must contain satisfactory completion of Grade XII English, as well as Mathematics and 1 Science at the 112 level. Students with marks above 60% in 121 or 122 level Mathematics, English, Biology or Chemistry may ask for credit in corresponding subjects.
- (iii) Prince Edward Island:  
Grade XII (University Prep.) including English,

Mathematics, 1 Science, and two other subjects, or satisfactory completion of a foundation program at Holland College.

- (iv) Newfoundland:  
Grade XI (University Prep.) including English, Mathematics, 1 Science, and two other subjects.
- (v) Applicants of mature age or from general course programs can be considered if they give evidence of probable success.

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 who are in good standing will be awarded a Technician Diploma and thus become "Associates of the Nova Scotia Agricultural College with all the rights and privileges pertaining thereto."

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

### Refresher Course

Candidates whose preparation is not considered adequate may be required to enrol for a refresher course in one or more subjects which will be offered from August 30 to September 10. The additional cost will be for books and for board and lodging only.

### Supplemental Examinations

A student in a Technician Course may write supplemental examinations in a maximum of three full subjects if his combined average for all subjects is above 50% and the mark in

the failed subject (s) is above 30%. A term subject will be rated as a half subject.

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 maximum of two supplementals will be permitted in each failed subject. No supplemental examination will be permitted in any subject after two years have elapsed following the original failure.

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 first supplemental examination in any subject will be \$5.00 and for a second \$10.00. 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.

### Financial Assistance

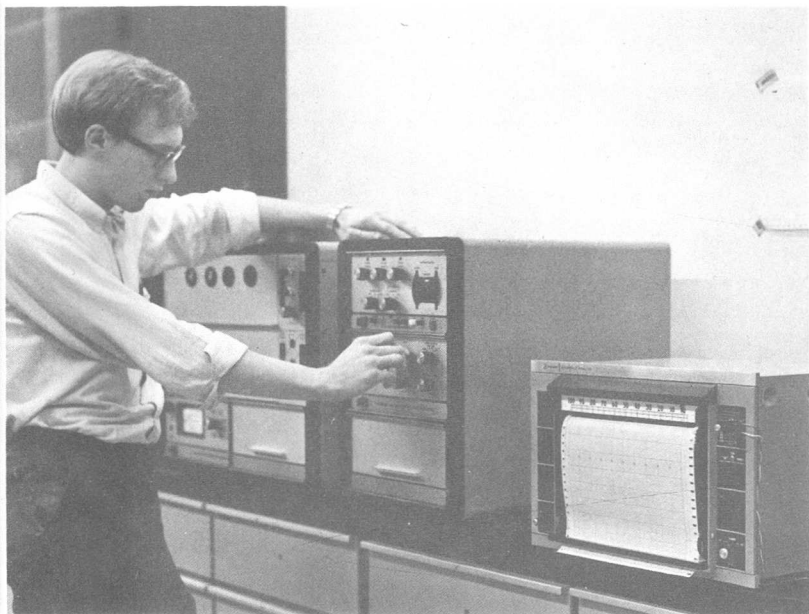
A living allowance of \$15.00 per week will be provided for Prince Edward Island students in good standing from Federal-Provincial funds if an application is made to the Director of Extension, Department of Agriculture, Charlottetown, at as early a date as possible. Each student, although receiving this assistance periodically, is still expected to pay to the College the full board payments for each date specified.

## A. AGRICULTURAL BUSINESS

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. The



course is composed of both on-campus instruction and in-service training.



# AGRICULTURAL BUSINESS SYLLABUS

## FIRST ACADEMIC YEAR

		First Lec.	Term Lab.	Second Lec.	Term Lab.
E 10	English . . . . .	3		3	
M 10	Applicable Mathematics . . . . .	3		3	
C 11	Soils (Physics and Chemistry) . . .	2	2	2	2
C 10	Basic Chemistry . . . . .	2	2	2	2
B 10	Biology . . . . .	2	4	2	4
AF 10	Agricultural Engineering . . . . .	2	2	2	2
100	Accounting . . . . .	2	2	3	
AB 11	Economics . . . . .	3	3		
	Physical Education (Elective program to be arranged)				
AB 12 (b)	Work Simplification—one week				

## PERIOD OF IN-SERVICE-TRAINING

At least four hundred hours of in-service training will be required prior to the commencement of the second academic year. The College will make every effort within its power to assist a student with a satisfactory standing to obtain appropriate work experience. A student on in-service training will earn a salary during the training period.

## SECOND ACADEMIC YEAR

		First Lec.	Term Lab.	Second Lec.	Term Lab.
110	Sociology	3			
120	Sociology			3	
	or				
121	Sociology			3	
AB 21(a)	Applied Marketing	one day per week			
300	Economics	2	4	2	2
320	Economics			3	
AB 23 (a)	Government and Law	3			
AE 20	Power and Machinery	2	2	2	2
PS 20	Field Crops Production	2	2	2	2
PS 21	Vegetable Production	2	4		
	and				
PS 21 (b)	Fruit Production			2	4
	or				
AS 10	Livestock Production	3	2	3	2
	Projects				

## B. ANIMAL SCIENCE

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. The course is composed of both on campus instruction and in-service training.

### ANIMAL SCIENCE SYLLABUS

#### FIRST ACADEMIC YEAR

		First Lec.	Term Lab.	Second Lec.	Term Lab.
E 10	English	3	0	3	0
M 10	Mathematics	3	0	3	0
C 10	Chemistry	2	2	2	2
C 11	Soils	2	2	2	2
B 10	Biology	2	4	2	4
AE 10	Agricultural Engineering	2	2	2	2
AS 10	Livestock Production	3	2	3	2
AS 11 (b)	Animal Husbandry Skills			0	2
	Physical Education (Elective program to be arranged)				
AB 12(b)	Work Simplification - one week				

#### PERIOD OF IN-SERVICE TRAINING

At least four hundred hours of in-service training will be required prior to the commencement of the second academic year. The College will make every effort within its power to assist a student with a satisfactory standing to obtain appropriate work experience. A student on in-service training will earn a salary during the training period.

## SECOND ACADEMIC YEAR

		First Lec.	Term Lab.	Second Lec.	Term Lab.
110	Sociology	3			
120	Sociology			3	
	or				
121	Sociology			3	
PS 20	Field Crops	2	2	2	2
AS 21	Processing	2	2	2	2
AS 23	Animal Physiology and Pathology	2	2	2	2
AS 20 (a)	Animal Nutrition	3	2		
AS 24	Animal Breeding			3	0
AE 20	Power and Machinery	2	2	2	2
AB 11	Economics	3	0	3	0
AS 20(a)	Animal Nutrition	3	2		
AS 22(a)	Breeds and Selection	1	2		
AS 25	Seminar			1	0
C 20	Chemistry*	2	4	2	4
M 20	Physics* Projects	2	3	2	3

\*Students who wish to qualify for a third year leading to a diploma as a Biology or Chemistry laboratory technologist must elect Chemistry C20 instead of Power and Machinery and Physics M20 instead of Breeds and Selection.

## C. PLANT SCIENCE

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. The course is composed of both on-campus instruction and in-service training.

## PLANT SCIENCE SYLLABUS

### FIRST ACADEMIC YEAR

		First Lec.	Term Lab.	Second Lec.	Term Lab.
E 10	English . . . . .	3		3	
M 10	Applicable Mathematics . . . . .	3		3	
C 11	Soils (Physics and Chemistry) . . . . .	2	2	2	2
C 10	Basic Chemistry . . . . .	2	2	2	2
B 10	Biology . . . . .	2	4	2	4
AE 10	Agricultural Engineering . . . . .	2	2	2	2
AB 11	Economics . . . . .	3		1	2
	or				
100	Accounting . . . . .	2	2	3	
B 11 (b)	Entomology . . . . .			2	2
	Physical Education (Elective program to be arranged)				
AB 12 (b)	Work Simplification – one week				

### PERIOD OF IN-SERVICE-TRAINING

At least four hundred hours of in-service training will be required prior to the commencement of the second academic year. The College will make every effort within its power to assist a student with a satisfactory standing to obtain appropriate work experience. A student on in-service training will earn a salary during the training period.

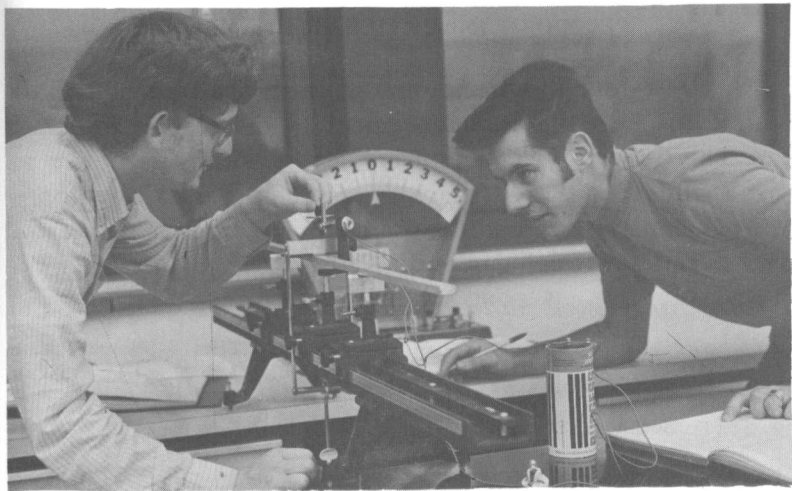
## SECOND ACADEMIC YEAR

		First Lec.	Term Lab.	Second Lec.	Term Lab.
110	Sociology * . . . . .	3			
120	Sociology * . . . . .			3	
	or				
121	Sociology * . . . . .			3	
B 20 (a)	Plant Identification * . . . . .	2	2		
B 22 (b)	Plant Physiology * . . . . .			2	2
PS 22	Plant Propagation* . . . . .	1	2	1	2
B 21 (a)	Plant Pathology * . . . . .	2	2		
AE 20	Power and Machinery * . . . . .	2	2	2	2
	Projects* . . . . .				
PS 23	Landscaping** . . . . .	1	2	1	2
PS 24	Greenhouse Crops Production** . . . . .	1	2	1	2
AE 21 (b)	Electrical Controls** . . . . .			1	3
PS 21 (a)	Vegetable Production** . . . . .	2	4		
PS 21 (b)	Fruit Production** . . . . .			2	4
PS 20	Field Crops Production** . . . . .	2	2	2	2
C 20	Chemistry*** . . . . .	2	4	2	4
M 20	Physics*** . . . . .	2	2	2	2
AE 15 (a)	Surveying ** . . . . .	1	2		
AE 26 (a)	Soil and Water Management ** . . . . .	2	2		
PS 25	Turf Management ** . . . . .	2	2	2	2
AE 27	Landscaping Equipment** . . . . .	2	3	2	3

\* Required subjects.

\*\*Subjects involving a minimum of eight additional lecture hours per week per year to be selected from this group in consultation with the instructor in the principal field of interest and the Dean of Vocational and Technical Training.

\*\*\*Candidates who wish to qualify for admission to a third year leading to a diploma as a Biology or Chemistry Laboratory Technologist will elect Chemistry instead of Power and Machinery and Physics instead of elective courses with an equivalent of lecture hours.



## D. AGRICULTURAL ENGINEERING

The Nova Scotia Agricultural College offers a two year course in Agricultural Engineering to help students prepare themselves for careers as Agricultural Engineering technicians in farm-related firms and services. The course is composed of both on campus instruction and in-service training.

### AGRICULTURAL ENGINEERING SYLLABUS FIRST ACADEMIC YEAR

		First Lec.	Term Lab.	Second Lec.	Term Lab.
E 10	English . . . . .	3		3	
M 10	Appliable Mathematics . . . . .	3		3	
C 11 (a)	Soils . . . . .	2	2		
AB 11	Economics . . . . .	3		1	2
M 11	Physics . . . . .	2	2	2	2
AE 11 (b)	Properties of Materials . . . . .			1	2
AE 12	Drafting . . . . .		3		3
PS 10	Plant Science . . . . .	3	2	3	2
AE 13	Shopwork . . . . .			1	2
AE 15 (a)	Surveying . . . . .	1	2		
	Physical Education (Elective program to be arranged)				
AB 12 (b)	Work Simplification – One Week				

## PERIOD OF IN-SERVICE TRAINING

At least four hundred hours of in-service training will be required prior to the commencement of the second academic year. The College will make every effort within its power to assist a student with a satisfactory standing to obtain appropriate work experience. A student on in-service training will earn a salary during the training period.

### SECOND ACADEMIC YEAR

		First Lec.	Term Lab.	Second Lec.	Term Lab.
110	Sociology .....	3			
120	Sociology .....			3	
	or				
121	Sociology .....			3	
AE 22	Farm Buildings .....	2	4	2	4
AE 23	Farm Power .....	2	4	2	4
AE 24	Farm Machinery .....	2	4	2	4
AE 25 (b)	Hydraulics .....			2	2
AE 21 (b)	Electrical Controls .....			2	2
AS 20	Livestock Production .....	3	2	3	2
	Projects .....				
AE 26 (a)	Soil and Water Management .....	2	2		

## DESCRIPTION OF COURSES

The following descriptions of all subjects in the four courses leading to Technician Diplomas are arranged in order of subject groups. The Faculty reserves the right to make any revisions or additions which may be necessary. The duration of lecture and laboratory periods is 45 minutes.

### 100: Accounting

Basic accounting procedures are stressed. Actual project work with farm and farm related business records helps the student to better understand inventories, assets, liabilities, owner's equity, changes in owner's equity, working capital, record book organization, preparing monthly statements, and



closing the books. Accounting techniques for several forms of business organizations are examined. Some time is devoted to banking procedures and payroll bookkeeping.

The interpreting of financial records for income tax and Canada Pension plan purposes is covered. By making comparisons of actual balance sheets, the financial structure, variations in current position, and several trends are identified. The importance of records for management decisions is stressed.

Pl. Sc. (elective),

Agr. Bus., 1st year, 1st term—2 lecs. and 2 labs. per week  
2nd term—3 lecs. per week.

### **AB 11: Economics**

This course studies the historical development of the Canadian economy. The student is introduced to the basic concepts of National Income, banking, public monetary and fiscal policy and trade. The development and structure of Canadian and Atlantic Region agriculture are studied.

The importance and costs of each function comprising the entire marketing process are examined. The course includes a study of consumer and supplier behaviour, pricing, price stability in various types of market structures, an examination of the various kinds of business organizations involved with marketing decisions, bargaining power, and the administration of quality control systems.

Pl. Sc. (elective), Agr. Eng., An. Sc., Agr. Bus., 1st year, 1st term — 3 lecs per week. 2nd term — 1 lec and 2 labs per week.

Text: Still and Cundiff, ESSENTIALS OF MARKETING

Reference Book: Kohls, MARKETING OF AGRICULTURAL PRODUCTS.

## AB 12 (b): 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.

Agr. Bus., An. Sc., Pl. Sc., Ag. Eng., 1st. year, 1 week-time to be arranged.

## 300: Economics

The principles and methods of analyzing and organizing farm and farm related businesses are examined. Practical problems associated with size of business, balance in organization, labor efficiency, and production systems are assigned to the students. Some time is spent in budgeting and production planning.

Various sources of capital and the techniques of managing each category of credit are studied. The effect of capital limitations on business organization also is examined.

Agr. Bus., 2nd year, 1st term—2 lecs. and 4 labs. per week.  
2nd term—2 lecs. and 2 labs. per week.

## AB 21 (a): Applied Marketing

Students visit a series of marketing organizations to learn the nature and extent of their operation, and the involvement of the organization in other segments of the agricultural industry. Causes of waste, spoilage, and low quality, and how costs of marketing are established are determined in several of the visits. Managers of the marketing organizations visited assist in the instruction.

Agr. Bus., 2nd year, 1st term—1 day per week.

## 320: Economics

This is a study of the influence of government on

Agriculture, including the effects of both agricultural and non-agricultural policies. Some of the current adjustments in Atlantic agriculture will be identified.

Agr. Bus., 2nd year, 2nd term—3 lecs. per week.

### AB 23 (a): Government and Law

Fundamental concepts of our Canadian parliamentary system of government are studied. Contemporary political problems in Canada are identified.

Several special contracts relating to employment and the transfer of property are examined.

Agr. Bus., 2nd year, 2nd term — 3 lecs. per week.

Texts: Saywell and Ricker, HOW ARE WE GOVERNED?

Chapman, FUNDAMENTALS OF CANADIAN LAW

### AE 10: Introduction to Agricultural Engineering

Lectures include a study of farm structures with special emphasis on layouts, building materials, environmental control and farmstead mechanization. The course also includes a practical introduction to electricity as it applies to the farm. Concepts of energy, voltage, current, resistance, power factor. Also introduction to electricity as it is used to produce light and heat.

Laboratory periods include practical instruction in the use of drafting instruments, lettering, orthographic projection, oblique and isometric drawings, sections, reading blueprints, sketching, and compiling bills of material. A brief shopwork course covering fitting and the use of handtools, metal work and welding.

Agr. Bus., An. Sc., Pl. Sc., 1st year, both terms—2 lecs. and 2 labs. per week.

## AE 11 (b): Properties of Materials

The characteristics and uses of various materials are studied. The design and analysis of simple trusses, beams, columns and machine components are studied.

Ag. Eng., 1st year, 2nd term – 1 lec. and 2 labs per week.

## AE 12: Drafting

An introduction is given to drafting; lettering, the use of drawing instruments, drafting machines, etc. Orthographic projection, oblique drawings, isometric drawings, developments, sections and free hand sketching are covered. Practical applications include compiling a bill of materials, blueprinting, map reading, etc.

Ag. Eng., 1st year, both terms– 3 labs per week.

## AE 13: Shopwork

The selection, maintenance and operation of work shop tools, including power grinders, electric drills, metal cutting saws, acetylene and electric welders. Techniques in the fitting of hand tools and the heat treatment of metals.

Ag. Eng., 1st year, both terms – 1 lec. and 4 labs per week.

## AE 15 (a): Surveying

An introduction to surveying methods, and instruments including practice measuring horizontal and vertical distances and angles, DMD areas and construction surveying.

Pl. Sc., 2nd year, 1st term: Ag. Eng., 1st year, 1st term – 1 lec. and 2 labs per week.

Text: Kissam, SURVEYING PRACTICE

## AE 20: Power and Machinery

An introduction to the position of farm machinery in modern agriculture. Tillage, application and harvesting equipment along with tractor power units and hydraulic systems will be studied.

Ag. Bus., An. Sc., Pl. Sc., 2nd year, both terms—2 lecs. and 2 labs. per week.

## AE 21 (b): Electrical Controls

This is a study of electrical controls and various types of switches such as limit, micro, mercury, remote control, photoelectric, etc.

The application of temperature and humidity controls for plant and animal environment.

Ag. Eng., Pl. Sc., 2nd year, 2nd term—1 lec. and 3 labs. per week.

## AE 22: Farm Buildings

The design of livestock and service buildings, farmstead and building layouts, beam and truss selection, environmental control, lighting requirements, water supply and materials handling systems are studied. Emphasis is placed on the solution of practical problems. Tours of modern farmsteads will be arranged whenever possible.

Ag. Eng., 2nd year, both terms—2 lecs. and 4 labs. per week.

## AE 23: Farm Power

History and development of heat engines. The adjustments, maintenance and major repairs of farm, diesel and gasoline tractor engines. Principles of operation and servicing of the various types of tractor clutches, transmissions and differen-

tials are investigated. Various types of A.C. Electric motors are discussed and their performance characteristics are determined.

Ag. Eng., 2nd year, both terms—2 lecs. and 4 labs. per week.

#### **AE 24: Farm Machinery**

The care and operation of tillage, application and harvesting equipment are studied along with farmstead and crop processing equipment. The cost of owning and operating modern field machinery systems is investigated.

Ag. Eng., 2nd year, both terms—2 lecs. and 4 labs. per week.

#### **AE 25 (b): Hydraulics**

The basic theory of operation and performance of hydraulic pumps, control valves, cylinders and motors. Emphasis is placed on the operating characteristics of hydraulic equipment and its selection for agricultural use.

Ag. Eng., 2nd year, 2nd term — 2 lecs. and 2 labs. per week.

#### **AE 26 (a): Soil and Water Management**

In this course emphasis is placed on land drainage, irrigation systems, water storage structures and erosion control measures. Laboratory periods include practice in using surveying instruments and irrigation equipment and solving associated problems.

Pl. Sc., Ag. Eng., 2nd year, 1st term — 2 lecs. and 2 labs. per week.

#### **AE 27: Landscaping Equipment**

This course will include the theory of operation and maintenance of small engines, pumps, spray equipment and all other machines and equipment associated with turf production.

Pl. Sc., 2nd year, both terms — 2 lecs. and 3 labs. per week.

## AS 10: Livestock Production

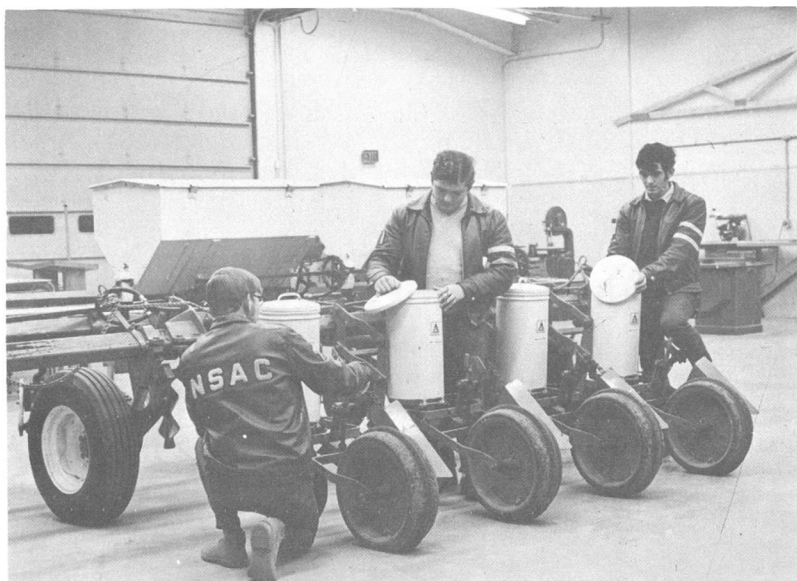
An introduction to animal agriculture with emphasis on dairy cattle, beef cattle, sheep, hogs and poultry. The course will include general aspects of the breeding, feeding, management and economics of these species.

An. Sc., 1st year, both terms; Agr. Bus., Ag. Eng., 2nd year, both terms – 3 lecs. and 2 labs per week.

## AS 11 (b): Animal Husbandry Skills

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.

An. Sc., 1st year, 2nd term – 2 labs. per week.



## AS 20 (a): Animal Nutrition

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. A comparative study of ruminant and monogastric digestion is made.

An. Sc., 2nd year, 1st term — 3 lecs and 2 labs per week.

## AS 21: Processing

This is a study of the composition and processing of the various livestock foods including meat and milk and their by-products. Also included will be discussions on the composition, quality control, flavour problems and both federal and provincial regulations concerning foods.

An. Sc., 2nd year, both terms—2 lecs. and 2 labs. per week

## AS 22 (a): Breeds and Selection

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.

An. Sc., 2nd year, 1st term—1 lec. and 2 labs. per week.

## AS 23: Animal Physiology and Pathology

This course considers the fluids of the body, circulation, respiration, digestions, absorption, excretion, energy exchange, muscular activity, neurology, endocrinology and the reproduction of domestic animals.

Systems of sanitation and hygiene promoting good health



are discussed. The causes, symptoms, prevention and control of common animal diseases and ailments are outlined.

An. Sc., 2nd year, both terms—2 lecs and 2 labs per week.

#### **AS 24 (b) : Animal Breeding**

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

An. Sc., 2nd year, both terms— 3 lecs per week.

#### **AS 25 (a): Animal Science Seminar**

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

An. Sc., 2nd year, 2nd term - 1 lec. per week.

#### **B 10: Biology**

This is a study of 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 the study of genetics. The role of organic cycles, the relationship of plants and animals to their environment, the regulation of growth and development, and nutrition are included.

Agr. Bus., An. Sc., Pl. Sc., 1st year, both terms—2 lecs. and 4 labs. per week.

#### **B 11 (b): Entomology**

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

Pl. Sc., 1st year, 2nd term—2 lecs. and 2 labs. per week.

## **B 20 (a): Plant Identification**

A course covering the classification and naming of plants with special attention given to plants of economic importance. These include the common weeds, trees and shrubs, and cultivated plants. The important plant families will be considered, along with laboratory work in identification.

2nd year, 1st term—2 lecs. and 2 labs. per week.  
Text: Jacques, *HOW TO KNOW THE WEEDS?*

## **B 21 (a): Plant Pathology**

The different types of diseases due to viruses, bacteria, fungi and environmental causes are discussed and a study is made of the organisms concerned. This is followed by an outline of the more important diseases of our ornamentals and field and vegetable crops. The methods of control, including the use of fungicides, are considered; and some attention is given to the machinery used for the application of fungicides.

Pl. Sc., 2nd year, 1st term—2 lecs. and 2 labs. per week

## **B 22 (b): Plant Physiology**

More advanced study of 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.

Pl. Sc., 2nd year, 2nd term—2 lecs. and 2 labs. per week.  
Text: Galston, *THE LIFE OF THE GREEN PLANT?*

## **C 10: Basic Chemistry**

A study of elements, compounds, atomic structure, bonding, and why reactions occur, is followed by a study of some specific reactions such as oxidation and reduction, neutralization and ionization; an introduction to Organic and Biochemis-

try. The basic chemical properties of some organics will be examined and related to the agricultural industry.

Agr. Bus., An. Sc., Pl. Sc., 1st year, both terms—2 lecs. and 2 labs. per week.

Text: Siebring, CHEMISTRY (1967).

Laboratory Manual: King, et al—LAB MANUAL FOR COLLEGE CHEMISTRY (latest edition).

Suggested Reference Books:

1. Quagliano, CHEMISTRY (3rd edition).

2. Frey, COLLEGE CHEMISTRY (3rd edition).

3. Sturchioetal: CHEMISTRY—PRINCIPLES AND CONCEPTS—1966.

### C 11: Soils (Physics and Chemistry)

The physical properties of soils are examined with special emphasis on soil profiles, soil textures, particle size, soil moisture, water retention, compaction, soil air, soil temperature, drainage, erosion, and tillage. Several types of Atlantic Provinces soil are examined.

The chemical properties of soil particles and solutions are studied as well as principal chemical reactions in soils. The function of soil as a medium to support plant life, fertilizing, liming, pH and plant nutrients are stressed. The selection, use, and effects of various chemical additives to the soil are discussed.

Agr. Bus., An. Sc., Pl. Sc., 1st year both terms—2 lecs. and 2 labs. per week.

Ag. Eng., 1st year 1st term—2 lecs. and 2 labs. per week.

Reference Texts: Miller, Turk and Foth, FUNDAMENTALS OF SOIL SCIENCE.

Miller, SOIL FERTILITY; Donahue, SOILS.

Laboratory Manual: Prepared mimeographed sheets.

## C 20: Organic Chemistry

The basic principles and theories of Organic Chemistry, the nomenclature of organic compounds, the chemistry of functional groups of various basic classes of organic compounds, the importance of Organic Chemistry in relation to animal and plant life, and introductory Biochemistry, including the study of carbohydrates, lipids, proteins, enzymes, and vitamins are presented.

The modern organic and biochemical methods of extraction, purification and identification are studied, using modern laboratory procedures. Spectrophotometric and microscopic analyses methods are employed. Laboratory procedures are correlated with lecture material and emphasis is placed on agricultural materials.

An. Sci., Pl. Sci., 2nd year, both terms—2 lecs. and 4 labs. per week.

Text: Hart and Schuetz, ORGANIC CHEMISTRY (3rd Edition); LABORATORY MANUAL: mimeographed procedures.

## E 10: English

This course is designed to assist the student with his reading comprehension, oral expression and written communications.

Students are given an intensive course in public speaking designed to develop confidence on the speaking platform. The course progresses from three-minute talks with notes to longer talks with only the use of information cards.

Weekly essays are assigned to develop writing skills. Reading exercises are undertaken both in and outside the class to develop speed and comprehension in reading. Outside reading also includes the works of accepted masters of the English language. Weekly exercises in vocabulary development are also conducted.

Ag. Eng., Agr. Bus., An. Sc., Pl. Sc., 1st year, both terms—3 lecs. per week.

Texts: Jorgensen and Shroyer, Editors A COLLEGE TREASURY; Emery and Kierzek, ENGLISH FUNDAMENTALS, FOURTH EDITION FORM C; Hardwick, WORDS ARE IMPORTANT, FIRST BOOK OF VOCABULARY IMPROVEMENT; Miller, INCREASING READING EFFICIENCY.

### M 10: Applicable Mathematics

Fractions, percentage, simple equations and word problems are reviewed and the slide rule and electronic calculator are introduced. The essentials of Algebra, Analytic Geometry and Trigonometry, introductory basic Calculus and some elements of computer programming are covered. Emphasis is placed on finance problems involving interest, discounts, mortgages, consumer loans, etc.

Ag. Eng., Agr. Bus., An. Sc., Pl. Sc., 1st year, both terms—3 lecs. per week.

Text: Washington, BASIC TECHNICAL MATHEMATICS.

### M 11: Physics

A course designed to give students background in the basic physical principles employed in such applied fields as structures, machine design and operation, electric power applications and controls, etc.

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.

Ag. Eng., 1st year, both terms—2 lecs. and 2 labs. per week.

Text: Pollock, APPLIED PHYSICS.

### M 20: Physics

This course emphasizes the fundamentals of light, electri-

city and magnetism, basic electronics, heat and atomic and nuclear physics, with only sufficient mechanics as is necessary for an understanding of these topics.

This course is to be elected only by those students who wish to proceed to a third year leading to a diploma as a Biology or Chemistry Laboratory Technologist.

An. Sc., Pl. Sc., 2nd year, both terms—2 lecs. and 2 labs. per week.

Text: Harris and Hemmerling, INTRODUCTORY APPLIED PHYSICS.

### Physical Education

That phase of education concerned with the teaching of skills and attitudes in play activities. A program providing each student with an opportunity to develop skill and understanding in a variety of sport activities that will serve him throughout life, and with unique opportunities in developing desirable character and social traits as well as defined responsibilities toward the physical development of the individual. The development of these traits, plus the objectives of increased strength and endurance, better motor skills, and improved health practices are the desirable outcomes of the physical education program.

Ag. Eng., Agr. Bus., An. Sc., Pl. Sc., 1st year (Elective program to be arranged).

### 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.

Ag. Eng., Agr. Bus., An. Sc., Pl. Sc., 2nd year, both terms—time to be arranged.

## PS 10: Plant Science for Agricultural Engineers.

Selected topics in elementary botany, choice of crops, seeds and seeding, crop management, weed control, harvesting, processing and preservation of important crop species.

Ag. Eng., 1st year, both terms—2 lecs. and 2 labs. per week.

Recommended reference text: Martin and Leonard, PRINCIPLES OF FIELD CROP PRODUCTION.

## PS 20: Field Crops Production

A study of grasses, legumes and other crops used in a forage program. Production, management, harvesting, storage and utilization practices suited to the various crops are studied. The development of forage programs is undertaken. The production, harvesting and storing of the common cereals are studied, along with their agronomic uses. Consideration is given to other Canadian crops not grown in the Atlantic region.

Agr. Bus., An. Sc., Pl. Sc., 2nd year, both terms—2 lecs. and 2 labs. per week.

Text: Martin and Leonard, PRINCIPLES OF FIELD CROP PRODUCTION.

## PS 21 (a): Vegetable Production

The increasing importance of vegetable production is recognized in this course. The source of our vegetables coming from a wide assortment of plants and from all parts of these plants, and types of vegetable production and storage are studied. Discussion of the culture of these crops makes frequent references to the practical application of theory studied in the science courses. The laboratory periods are used to show the preferred varieties and the reasons for their being in demand for retail sale or for processing.

Agr. Bus., Pl. Sc., 2nd year, 1st term—2 lecs. and 4 labs. per week.

## PS 21 (b): Fruit Production

This course includes both small fruit culture and tree fruits. The practices involved in the production of strawberries, blueberries, raspberries, blackberries, currants, gooseberries and cranberries and the practices carried out in orchard operations are studied.

Agr. Bus., Pl. Sc., 2nd year, 2nd term—2 lecs. and 4 labs. per week.

## PS 22: Plant Propagation

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.

Pl. Sc., 2nd year, both terms—1 lec. and 2 labs. per week.

## PS 23: Landscaping

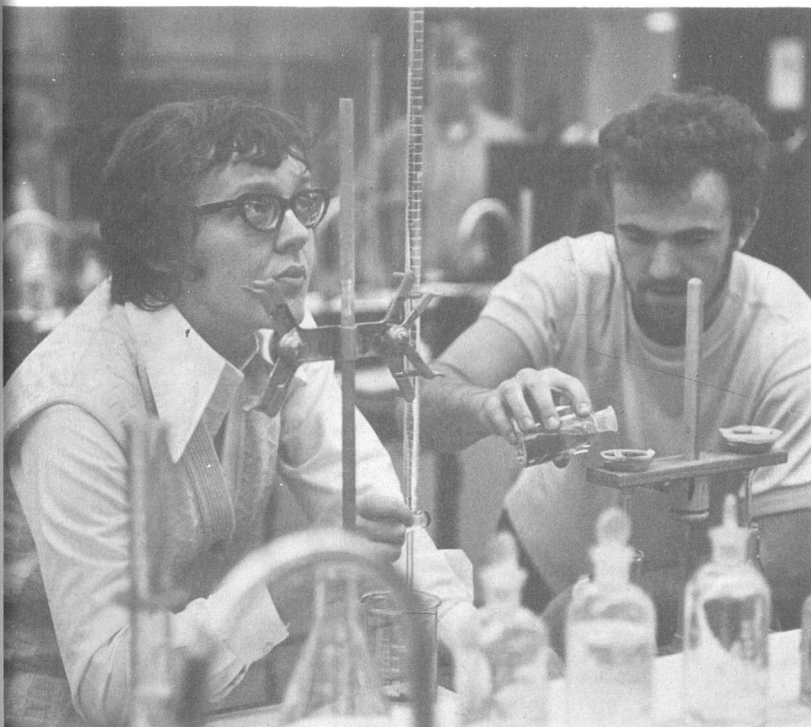
This course deals with ornamental plant materials, their identification, culture and maintenance and their use in landscaping planning. Subjects covered include trees, shrubs, lawns, bulbs, annual and perennial flowers.

Pl. Sc., 2nd year both terms—1 lec. and 2 labs. per week.

## PS 24: Greenhouse Crops Production

This course deals first with the types of houses in which crops are presently grown and the associated heating plants and controls. The general practices involved in successful operation such as heating, ventilation, watering, fertilizing, leaching, spraying, and sterilizing are studied. The culture of the individual greenhouse vegetable crops and the important florist





crops is also covered in detail both in the classroom and the associated greenhouses.

Pl. Sc., 2nd year, both terms—1 lec. and 2 labs. per week.

### **PS 25: Turf Management**

This course will deal with current production and management practices for turf culture. Establishment of new grass areas and the maintenance of established turf will be covered.

The specific production and maintenance practices for a wide variety of purposes will be included.

Pl. Sc., 2nd year, both terms—2 lecs. and 2 labs. per week.

## 110: Sociology

An understanding of individuals, their society, and the world in which they live will be given. In this introductory course, several basic sociological concepts will be introduced, specific sub-cultures examined and some community structure identified. A major part of the course will be a comprehensive analysis of the student's home community.

Agr. Bus., Agr. Eng., An. Sc., Pl. Sc., 2nd year, first term—  
3 lecs. per week.

Texts: Shinn, R., THE TANGLED WORLD; Berton, P., THE SMUG MINORITY; Berger, P., INVITATION TO SOCIOLOGY; Frankl, V., MAN'S SEARCH FOR MEANING; and other assigned readings.

## 120: Sociology

A comprehensive study of community structure, and several other group relationships will be made. The relationships between technology, environment, and human values, morals and decision making are considered.

Agr. Bus., Agr. Eng., An. Sc., Pl. Sc., 2nd year, 2nd term—  
3 lecs. per week.

Texts: Shinn, R., THE TANGLED WORLD; Berton, P., THE SMUG MINORITY; Berger, P., INVITATION TO SOCIOLOGY; Frankl, V., MAN'S SEARCH FOR MEANING; and other assigned readings.

## 121: Sociology (Personnel Relations)

The development and management of human resources are studied as they apply to several types of Canadian business organizations. Recruiting and selection, interviewing techniques, testing, performance appraisal, wage and salary administration, labor relations and characteristics of bureaucracy are examined in detail. The student is also introduced to the styles and schools of personnel management.

Agr. Bus., Agr. Eng., An. Sc., Pl. Sc., 2nd year, 2nd term—  
3 lecs. per week.

Text: McLeod, PERSONNEL MANAGEMENT FOR CANADIANS

## II TECHNOLOGY COURSES

The Nova Scotia Agricultural College offers courses designed to help Technicians gain more intensive study so that they may become more proficient in their chosen fields of endeavour.

- (a) AB 30: Advanced Business Management
- (b) E 30: Sociology
- (c) C 30: Plant Nutrition
- (d) C 31: Qualitative and Quantitative Analysis
- (e) C 32: Instrumentation
- (f) C 33 (b): Laboratory Organization, Records, and Reports
- (g) B 30: Biological Techniques
- (h) B 31 (a): Biology Laboratory Practice
- (i) B 32 (b): Microbiology
- (j) B 33: Laboratory Project
- (k) M 30 (a): Basic Statistics
- (l) PS 30 (b): Advanced Field Crops
- (m) AS 30 (a): Advanced Animal Nutrition
- (n) Selected second year subject from Technician courses.
- (o) Selected subjects from Degree Course for which prerequisites are met.
- (p) New subjects for which there is sufficient demand.

Students who complete all the requirements with no mark below fifty per cent of the maximum mark obtainable will be granted a Technologist Diploma.

A high honours diploma will be awarded to a student who has attained an average of at least eighty per cent and who has no marks of less than A grade on projects and an honours diploma to one who has attained an average of at least seventy-five per cent and who has no marks of less than A grade on projects.

### Entrance Requirements

A candidate for admission must:

- (a) be a graduate of a Technician or an equivalent course;

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

“Program of Study” forms are available from the Registrar, Nova Scotia Agricultural College, Truro, Nova Scotia. Application forms accompanied by a completed program of study should be submitted before May 1 of the year in which study is to commence.

Those students wishing to become Biology Laboratory Technologists must include B 30, B 31 (a), B 32 (b), and B 33 in their program of study. Those students wishing to become Chemistry Laboratory Technologists must include C 31, C 32, and C 33 in their program of study.

Each program of study must contain at least two full year subjects, projects, and considerable laboratory experience. The required subjects may include the following:

## DESCRIPTION OF COURSES

The following courses are arranged for the 1971-1972 academic year. The Faculty reserves the right to make any revisions or additions which may be necessary.

### **AB 30: Advanced Business Management**

Micro-economics, inventory control, personnel management, and linear programming are examined. Students are required to carry out a quite intensive project designed to give practical management experiences. Business Management games and text cases are used to further students' training in the area of business management.

3rd year, both terms— 2 lecs. and 2 labs. per week.

### B 30: Biological Techniques

Preparation of sectioned and other materials for microscopical examination, use of the microtome, staining and slide preparation; cytological and chromosome study.

3rd. year, both terms—2 lecs. and 4 labs. per week.

Reference Texts: Johansen, PLANT MICROTÉCHNIQUE; Sass, ELEMENTS OF BOTANICAL TECHNIQUE; Peacock, ELEMENTARY MICROTÉCHNIQUE

### B 31 (a): Biology Laboratory Practices

Care of cultures of live plant, insect and small animal materials for laboratory use; collecting, preparation and classification of specimens for permanent collections; photographic and darkroom procedures.

3rd year, 1st. term—2 lecs. and 3 labs. per week.

### B 32 (b): Microbiology

Elementary microbiology; methods of culturing and media for growth of micro-organisms: protozoa, yeasts, molds and bacteria; growth of tissue cultures.

3rd year, 2nd. term—2 lecs. and 3 labs. per week.

### B 33: Laboratory Project

A laboratory project or projects to be carried out utilizing the techniques learned in the more formal classes.

3rd year, both terms—4 labs. per week.

### C 31: Qualitative and Quantitative Analysis

Using modern chemical methods to evaluate the qualitative nature of inorganic and organic agricultural materials, gravimetric, spectro-chemical, chromatographic, volumetric and titrimetric quantitative methods.

*H. J. Stewart*

3rd Year, both Terms—3 lecs. and 4 labs per week.  
Text: To be announced

C 32: Instrumentation *- # of students*

Use of modern instrumentation in the Chemistry Laboratory including atomic absorption, gas chromatography, spectroscopy, colorimetry, fat fibre, Kjeldahl, soil and tissue determination, collection and preparation of samples for analysis.

3rd Year, both Terms—3 lecs. and 4 labs per week.

Text: To be announced.

*WE WILL  
NOT BE CONCERN!*  
C 33 (b): Laboratory Organization, Records and Reports

The organization and operation of a modern chemical laboratory; the keeping of records and reporting of analytical results.

3rd Year, Second Term—2 lecs. per week.

Laboratory: WORK IN CHEMISTRY LABORATORY  
Special Projects

C 30: Plant Nutrition

A study of the plant system as it relates to nutrition, involving translocation, transpiration, photosynthesis, essential elements and their role in the health and vigor of plants, symptoms of deficiencies and the diagnostic techniques used in studying the nutrition of plants. Evaluation of plant nutrition in relation to field and greenhouse crop production.

3rd year, both terms—2 lecs. and 2 labs per week.

Text: To be announced

Laboratory: Student selected plant nutrition projects.

Reference Texts: Bear et al, HUNGER SIGNS IN CROPS, Golston, THE LIFE OF THE GREEN PLANT, Sprague, MINERAL DEFICIENCIES IN PLANTS, Guilbert, MINERAL NUTRITION

### **E 30: Sociology**

A discussion course in rural sociology, communication theory, leadership training and group dynamics. Through the course, instruction will also be given in communication skills.

3rd year, both terms—2 lecs. and 2 labs. per week.

### **M 30 (a): Basic Statistics**

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

1st term—3 lecs. per week

Text: Bishop, STATISTICS FOR BIOLOGY

### **PS 30 (b); Advanced Field Crops (Prerequisite-Plant Science 20) 20)**

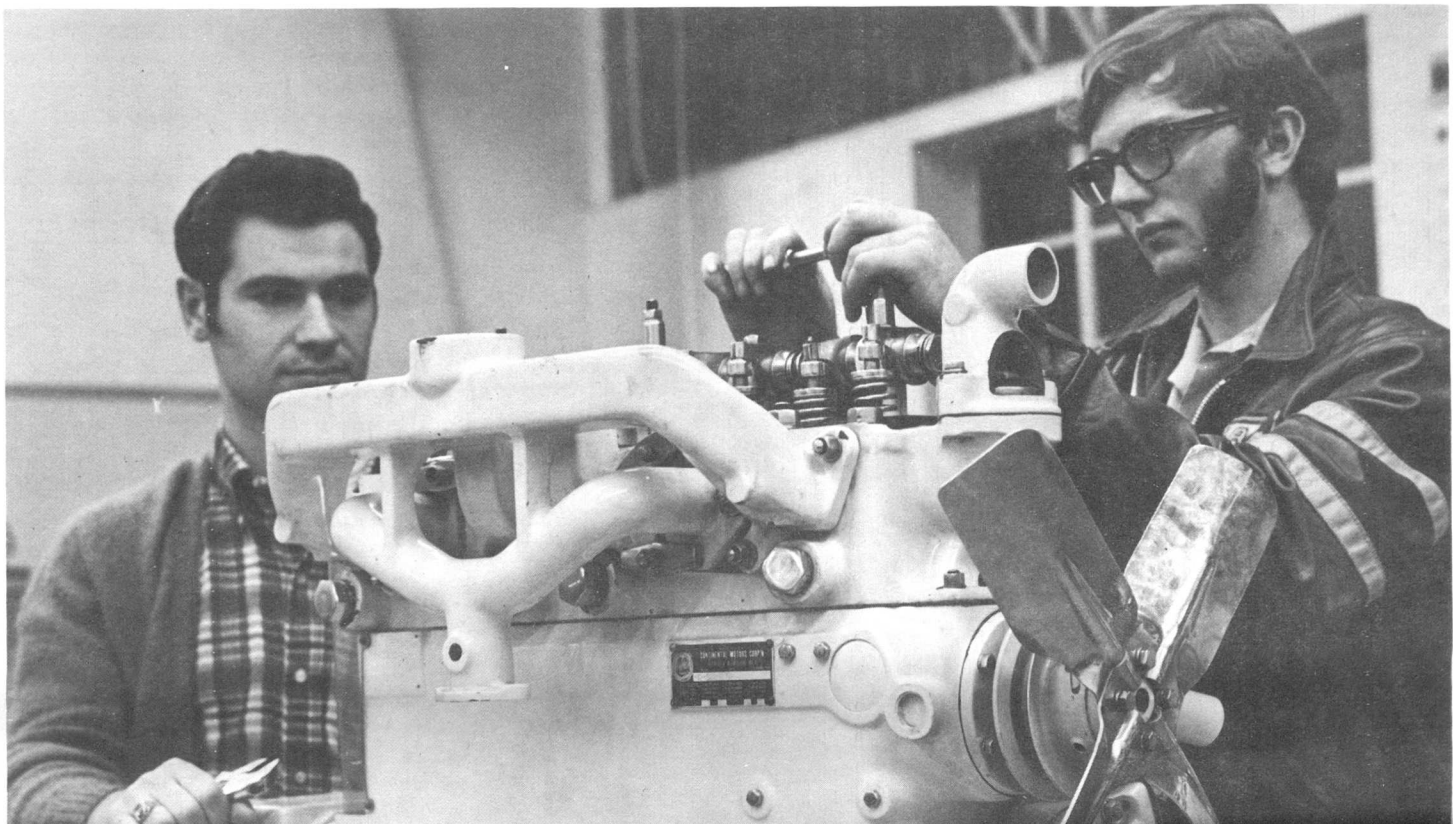
Production of field crops for industrial and commercial markets. Specialized seed production.

2nd term—2 lecs. and 1 lab. per week.

### **AS 30 (b): Advanced Animal Nutrition**

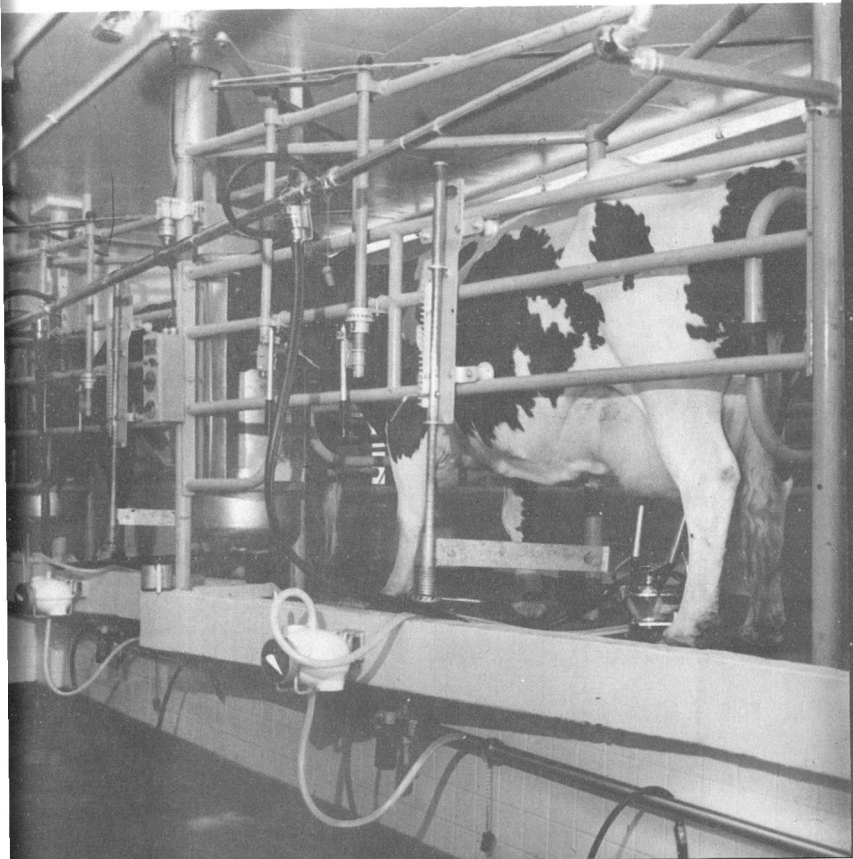
Advanced study in the nutrition of farm animals. The course will deal with the utilization of nutrients and will require independent study of current research.

3rd year, 2nd term—3 lecs. 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 1970-71 year. Similar, but not necessarily the same, courses will be planned for the 1971-72 year.

### Upgrading Courses

Greenhouse Crop Production	October 26, 1970	October 30, 1970
Swine Herd Operation	November 30, 1970	December 11, 1970
Dairy Husbandry	January 4, 1971	January 8, 1971
Farm Bookkeeping	January 11, 1971	January 15, 1971
Can. Farm Records Systems	January 18, 1971	January 22, 1971
Tree Fruit Production	January 18, 1971	January 22, 1971
Floral Design	January 18, 1971	January 22, 1971
Potato Marketing	January 25, 1971	January 29, 1971
Swine Herd Operation	February 1, 1971	February 12, 1971
Mink Production	February 1, 1971	February 5, 1971
Strawberry Production	February 8, 1971	February 12, 1971
Farm Record Analysis	February 15, 1971	February 19, 1971
Sheep Production	February 22, 1971	February 26, 1971
Beef Cattle Production	February 22, 1971	February 26, 1971
Grain Production	February 22, 1971	February 26, 1971
Vegetable Crops Production	February 22, 1971	February 26, 1971
Tobacco Production	March 1, 1971	March 5, 1971
Swine Health	March 1, 1971	March 5, 1971
Dairy Cattle Health	March 1, 1971	March 5, 1971
Nursery Crop Production	March 15, 1971	March 19, 1971
Operation & Repair of Farm Machinery	March 15, 1971 March 1, 1971	March 26, 1971
Christmas Tree Production	March 8, 1971	March 12, 1971

### Occupational Courses

Grooms for Standardbred Horses	October 5, 1970	October 30, 1970
Woodlot Harvesting	October 5, 1970	October 30, 1970
Poultry House Operation	November 2, 1970	February 26, 1971

Mixed Farming Practices	November 2, 1970	March 19, 1971
Woodlot Harvesting	November 9, 1970	December 4, 1970
Turf Production (3 days per week)	January 25, 1971	March 4, 1971
Artificial Insemination	When Negotiated	

## 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 \$22.00 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.

Students sponsored by Canada Department of Manpower may receive training allowances from that department.

Young people from Nova Scotia who register for a vocational course and who must live away from home for two or more weeks while enrolled in a course may receive a living allowance of \$15.00 per week from 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 Registrar, Nova Scotia Agricultural College, Truro, Nova Scotia.

Location of Canada Manpower Centres in the Atlantic Region:

## A. Nova Scotia

Amherst—119 Victoria Street, P.O. Box 519  
Bridgewater—763 King Street, P.O. Box 860  
Dartmouth—39 Wentworth Street, P.O. Box 9  
Glace Bay—59 Main Street  
Halifax—1256 Barrington Street, P.O. Box 2377  
Inverness—Federal Building, Railway Street  
Kentville—Federal Building, 495 Main Street  
Liverpool—164 Main Street  
Lunenburg—Post Office Building  
New Glasgow—35 Donald Street  
New Waterford—Post Office Building, Plummer Avenue  
North Sydney—211 Prince Street  
Pictou—31 Front Street  
Port Hawkesbury—Port Hawkesbury  
Springhill—68 Main Street, P.O. Box 2050  
Sydney—308 George Street, P.O. Box 1120  
Sydney Mines—105 Main Street  
Truro—15 Arlington Place  
Yarmouth—13 Willow Street

## B. NEW BRUNSWICK

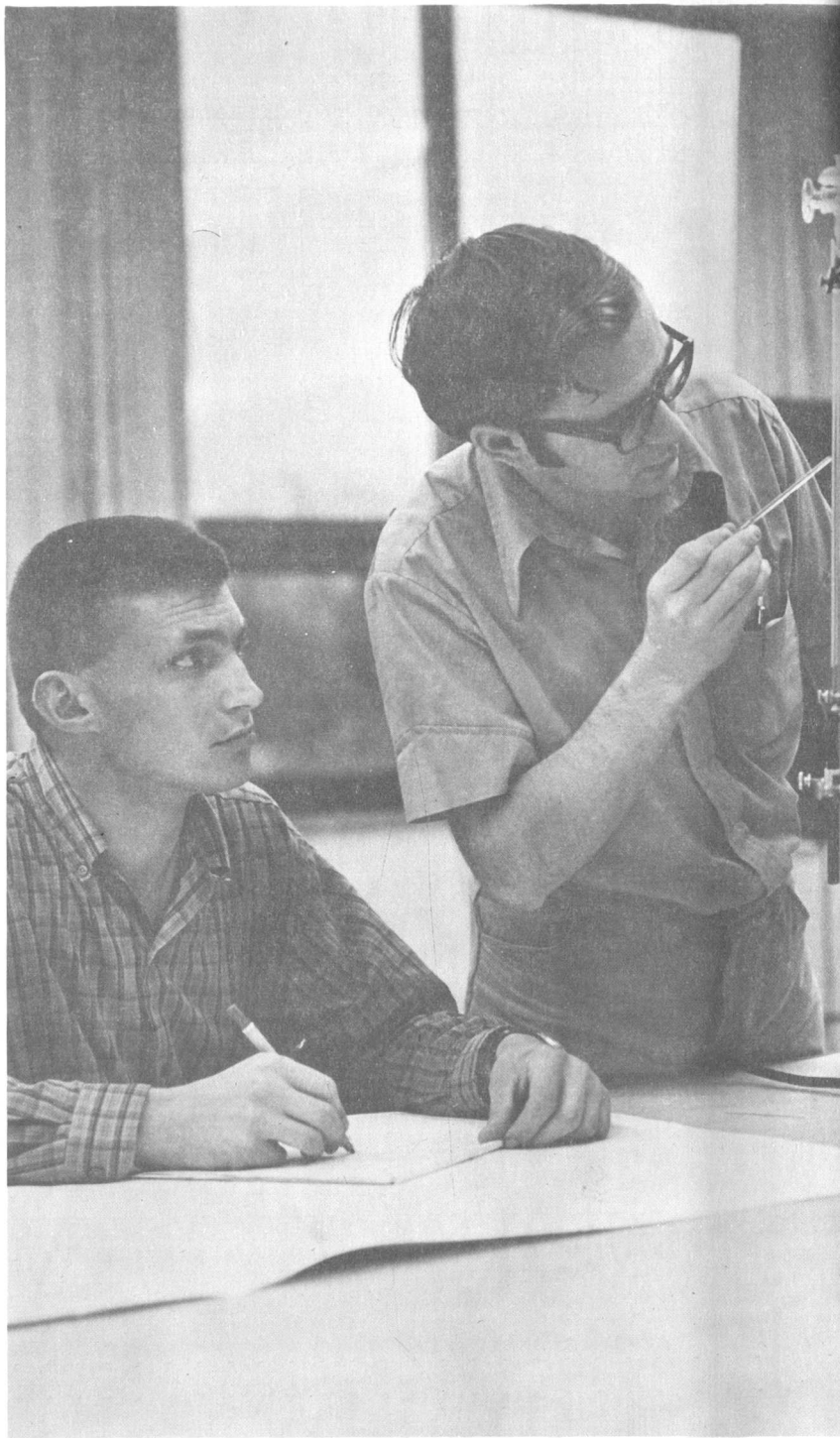
Bathurst—473 King Avenue  
Campbellton—37 Roseberry, P.O. Box 610  
Chatham—Federal Building, Duke Street  
Edmundston—Federal Building, 22 Emerson Street  
Fredericton—626 Campbell Street  
Keswick—Campbell Street  
Minto—Swift Building, P.O. Box 129  
Moncton—1081 Main Street  
Newcastle—Federal Building, Pleasant Street  
Sackville—Federal Building, Main Street  
Saint John—93 Canterbury St.  
St. Stephen—93 Water Street  
Sussex—48 Maple Avenue  
West Saint John—12 Church Street  
Woodstock—Federal Building, Regent Street

### C. PRINCE EDWARD ISLAND

Charlottetown—Dominion Building, Richmond Street  
Summerside—Federal Building, Central Street

### D. NEWFOUNDLAND

Corner Brook—Kawaja Building, 17 Broadway  
Gander—Koslow Building  
Grand Falls—High Street, P.O. Box 480  
St. John's—391 Water Street West, P.O. Box 1900  
Stephenville—Stephenville

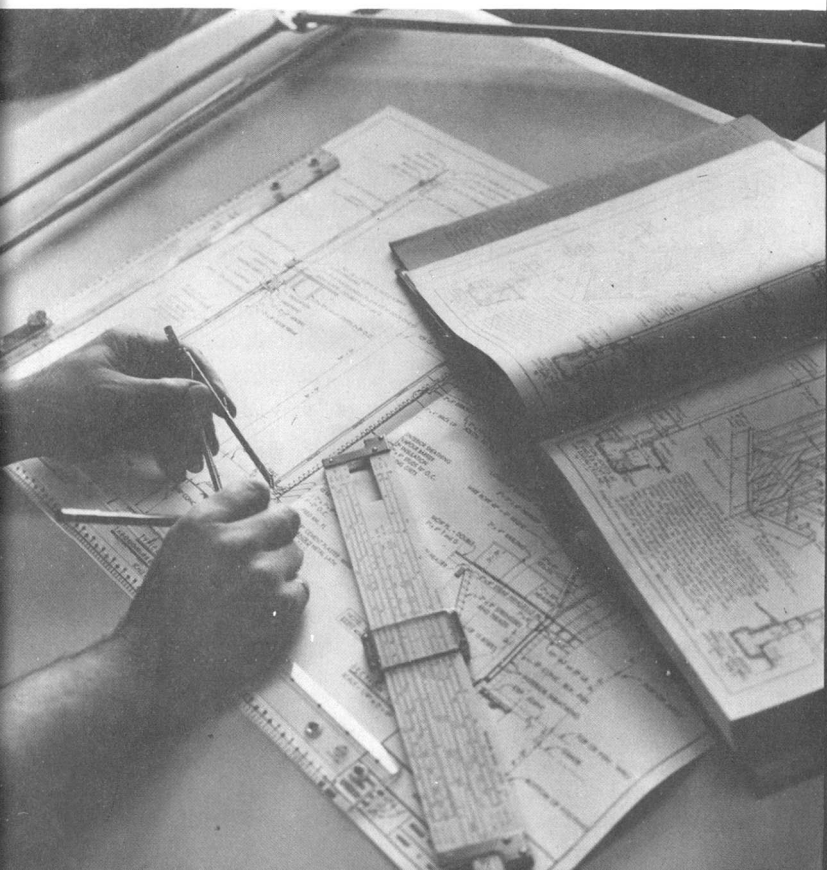








SCHOLARSHIPS  
AND PRIZES



# 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.

## 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 course offered to second year Technician students (Animal Science) and who subsequently enrolls in suitable courses of the Technology year.

# SCHOLARSHIPS

## ENTRANCE SCHOLARSHIPS (DEGREE COURSE) 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.

## MARITIME STOCK BREEDERS' ASSOCIATION SCHOLARSHIPS

The Maritime Stockbreeders' Association offers three scholarships of \$250., one to a resident of Nova Scotia, one to a resident of New Brunswick, and one to a resident of Prince Edward Island. A candidate must be a graduate of a recognized high school in his province. This scholarship is designed to encourage students to take up agriculture as a vocation or profession. Academic standing and financial need will be taken

into consideration in awarding the scholarship. Application for this scholarship must be made in writing to the Registrar on or before August 15.

An application form will be sent by the Registrar's office to those who so request.

## **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, of final school marks of the matriculation year or of the provincial examinations. Application for consideration on the basis of school marks must be made before May 15; candidates with high provincial examination marks or 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.

### **ENTRANCE SCHOLARSHIPS (DEGREE OR TECHNICIAN COURSE)**

#### **NOVA SCOTIA AGRICULTURAL COLLEGE ALUMNI SCHOLARSHIP**

The Nova Scotia Agricultural College Alumni Association offers a scholarship of \$300.00 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.

#### **NOVA SCOTIA FEDERATION OF AGRICULTURE SCHOLARSHIPS**

The Nova Scotia Federation of Agriculture offers two scholarships of \$150. each to Nova Scotians, one to a student

entering the Degree Course and one to a student entering the Technician Course. In awarding the scholarship, potential leadership qualities (based on involvement in the home community), financial need, and academic standing, will be taken into consideration. No application form is provided, but a candidate who wishes to be considered should submit to the Registrar, before August 15, a letter providing pertinent details which will assist the selection committee in making its choice.

### 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 the 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 \$100.00, payable in two parts: \$50.00 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 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.

## **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.

## **ENTRANCE SCHOLARSHIPS (TECHNICIAN COURSE)**

### **MARITIME CO-OPERATIVE SERVICES LTD. BURSARIES**

Maritime Co-operative Services Ltd. offers four bursaries of \$100. each to students entering the Technician Course.

The selection will be made on the following basis: (a) the recommendation of a local co-operative or district Federation of Agriculture, (b) need, and (c) potential for community leadership and/or co-operative endeavour.

Applications should be sent to 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 \$100.00, open to a candidate who is a son or a daughter of a Federation member and who is enrolled in 1969-70 in the Technician Course at this institution. The scholarship will be payable in two parts: \$50.00 on completion of the first year and \$50.00 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.)

### GULF OIL CANADA LIMITED

Gulf Oil Canada Limited offers a scholarship of \$150.00 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 \$2000.00, the interest on which is to be awarded annually to a worthy student who has finished his second year and is entering the third year in agriculture. No application is necessary.

### **THE VICIOUS CIRCLE SOCIETY SCHOLARSHIP**

A small number of graduates of the Degree classes of 1966 and 1967 who call themselves the Vicious Circle Society have established a scholarship of \$200. for a worthy Canadian student in the third year of the Degree Course. A reasonable academic standing and financial need will be taken into consideration in determining the winner. 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**

(TECHNICIAN AND TECHNOLOGIST)

(For students at the Nova Scotia Agricultural College.)

## **PROVINCIAL SCHOLARSHIPS: NEW BRUNSWICK AND NOVA SCOTIA**

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.)

## **MACDONALD COLLEGE SCHOLARSHIP**

Macdonald College offers a scholarship of two years' tuition to the student of the Nova Scotia Agricultural College who obtains the highest standing in the work of the third year of the Degree Course in that College, and who subsequently registers in the fourth year at Macdonald College. The scholarship will be paid in two instalments: half at the beginning of the fourth year, half at the beginning of the fifth year.

## CANADA PACKERS LIMITED SCHOLARSHIP

Canada Packers Limited offers a scholarship of \$250 to a worthy student who has satisfactorily completed the three year Degree Course at the Nova Scotia Agricultural College and who elects to continue in an Animal Husbandry, 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.

## KETCHUM MANUFACTURING COMPANY LIMITED SCHOLARSHIP

The Ketchum Manufacturing Company Limited has provided a \$1,000 Dominion of Canada Bond, the interest on which is to be used for an annual scholarship available to a Nova Scotia Agricultural College graduate registered in an Animal Husbandry option. The scholarship will be awarded to a worthy student with a satisfactory academic standing. Application for this scholarship must be made to the Registrar before April 15 of the applicant's last year at the Nova Scotia Agricultural College.

## MARITIME CO-OPERATIVE SERVICES LIMITED SCHOLARSHIP

Maritime Co-operative Services Limited offers a scholarship of \$100.00 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:

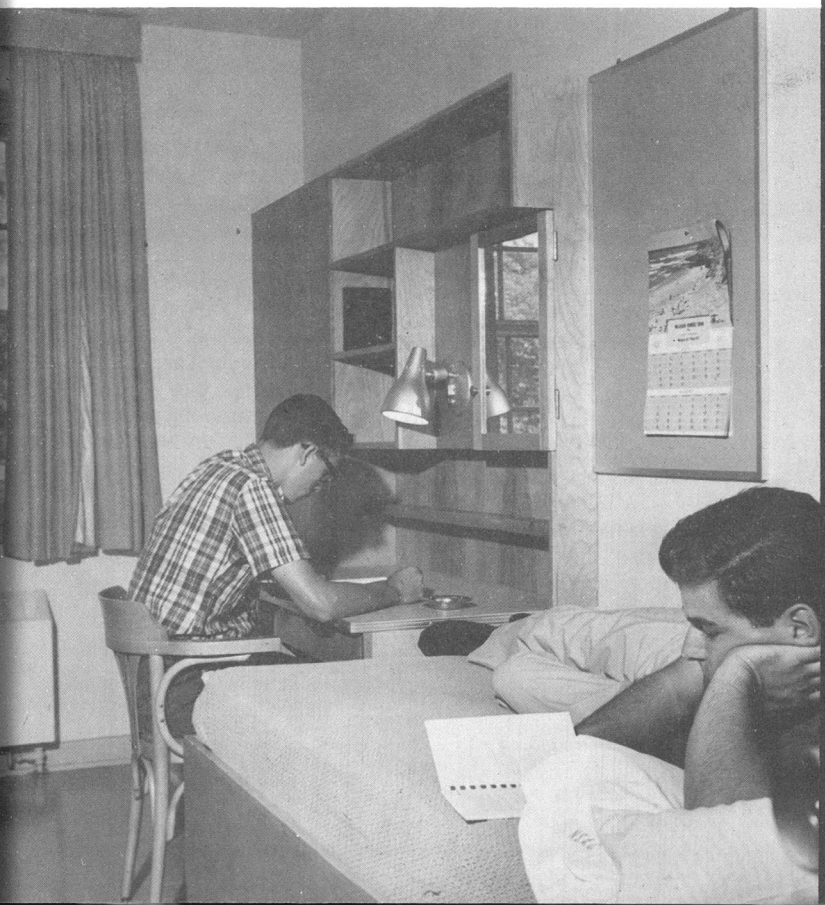
- (a) scholastic ability,

- (b) financial need,
- (c) knowledge and appreciation of co-operatives.

Application forms may be obtained from the Principal of the Nova Scotia Agricultural College.

Applications must be submitted to the Registrar by April 1.

DIRECTORY  
OF STUDENTS



# NOVA SCOTIA AGRICULTURAL COLLEGE ENROLLMENT 1970-1971

## FIRST YEAR DEGREE

- C. R. Anderson, R. R. 1, Port Elgin, N. B.  
R. J. Andrews, 986 South Blond Street, Halifax, N. S.  
Miss L. M. Bateman, R.R.1, Dorchester Crossing, N.B.  
R. F. Bennett, 261 South Street, Glace Bay, N. S.  
A. A. Bishop, R.R. 2, Wolfville, N. S.  
B. D. Bishop, River de Chute, N. B.  
Miss N. Bourque, 29 Douglas Street, Charlottetown, P. E. I.  
J. S. T. Bowman, P. O. Box 46, Petitcodiac, N. B.  
I. J. Breau, 95 Cornhill Street, Moncton, N. B.  
J. J. Brennap, Jr., R.R.I, Bath, N. B.  
C. F. Carter, Norton, R.R. 4, N. B.  
R. W. Churchill, P. O. Box 121, Yarmouth, N. S.  
K. R. Corkum, Box 137, Canning, N. S.  
K. A. Curran, Mount Stewart, R.R. 5, P. E. I.  
R.L. Cutcliffe, Carleton Siding, P. E. I.  
E. N. DeMerchant, Perth, R.R. 2, N. B.  
W. E. Dill, 14 Charles Court, Truro, N. S.  
D. L. Donner, 24 Logan Street, Truro, N. S.  
C. F. Ford, 6418 London Street, Halifax, N. S.  
W. A. Fraser, R. R. 2, Somers Road, Antigonish, N. S.  
W. J. E. Girrior, P. O. Box 176 Antigonish, N. S.  
J. L. Greig, 670 - 37th. Ave., Lachine, Montreal 610, Quebec  
B. W. Hagell, 236 Willow Street, Truro, N. S.  
S. S. Healy, R. R. 2, Wolfville, N. S.  
J. W. Higgins, 1 MacKay Court, Truro, N. S.  
M. L. D. Hilchie, Noel, Hants County, N. S.  
D. R. Hill, R. R. 5, Truro, N. S.  
P. J. Hominick, 40 Breton Street, Sydney, N. S.  
R. O. Isner, 1406 Prince Street, Truro, N. S.  
D. W. Jerrett, P. O. Box 136, Botwood, Newfoundland  
J. W. Johnson, R. R. 9, Moncton, N. S.  
I. A. L. Joseph, Rosignol Village, W. C. Berbice, Guyana, S. A.  
R. P. Kamper, Arnhem, Holland  
N. D. Kidston, R. R. 1, Port Williams, N. S.  
M. L. Knowles, R. R. 2, Newport, N. S.  
F. W. Lane, Jr., 7 Miller Road, Truro, N. S.  
W. H. Lloyd, Jr., P. O. Box 44, Hubbards, N. S.  
G. F. Lutes, R. R. 1, Moncton, N.B.  
M. J. Matthews, R. R.I, Lower Sackville, N. S.  
Miss B. L. Mauger, 18 Belvedere Drive, Dartmouth, N. S.  
Miss J. M. Mingo, 99 Brunswick Street, Truro, N. S.  
J. Misek, c/o: Pavel Calda, 5225 Green Street, Halifax, N. S.

R. L. Mitchell, 121 Smith Avenue, Truro, N. S.  
 G. D. Moore, R. R. 3, Oxford, N. S.  
 M. H. Moore, 149 Church Ave., Sussex, N. B.  
 C. L. B. Morrison, Shore Road, Eastern Passage, N. S.  
 J. E. Murphy, 16 Norwood Avenue, Sydney, N. S.  
 M. P. Murphy, P. O. Box 4191, St. John's, Newfoundland  
 C. J. MacBeth, St. Peters, P. E. I.  
 B. S. MacDonald, Lakeview Drive, Sydney, N. S.  
 J. I. MacDonald, Mount Stewart, R. R. 5, P. E. I.  
 M. A. MacEachern, R. R. 3, Tatamagouche, N. S.  
 D. W. McIsaac, Florenceville, N. B.  
 G. H. McLane, 352 Prince Street, Truro, N. S.  
 D. A. MacLean, 25 Osborne Avenue, Dartmouth, N. S.  
 A. T. McNally, Mount Stewart, P. O. ,P. E. I.  
 R. I. MacRae, R. R. 1, Stellarton, N. S.  
 B. R. Neaves, R. R. 3, Kentville, N. S.  
 A. H. F. Oderkirk, Port Howe, N. S.  
 A. G. Pabani, P. O. Box 9, Namasagau, Uganda  
 W. B. Palmer, Freeland, Ellerslie, R. R. 2, P. E. I.  
 P. L. Parlee, Apohaqui, R. R. 2, N. B.  
 B. F. Poirier, 52 Alexandra Street, Glace Bay, N. S.  
 P. R. Richardson, Lambertville, Deer Island, N. B.  
 D. E. Robinson, R. R. 1, Kentville, N. S.  
 J. T. Rogers, 4 Chisholm Street, Sydney Mines, N. S.  
 Miss S. M. Scallion, 6178 Shirley Street, Apt. 1, Halifax, N. S.  
 J. L. Seaman, Truro, R. R. 3, N. S.  
 C. E. Sherwood, 41 Crieghton Avenue, Saint John, N. B.  
 B. G. Smith, R.R. 1, Debert, N. S.  
 W. L. Smith, R. R. 4, Amherst, N. S.  
 D. J. Snilner, R. R. 2, Shawinigan, St. Maurice, P. Q.  
 A. D. Stevenson, 311 MacLean Street, New Glasgow, N. S.  
 K. A. Stewart, 32 Vimy Road, Truro, N. S.  
 J. R. Swan, 20 Brunswick Street, Truro, N. S.  
 J. P. Swinkels, R. R. 1, Afton, N. S.  
 S. L. Taylor, 474 Bedford Highway, Prince's Lodge, Halifax, N. S.  
 Miss H. L. Tweedy, Bernon Bridge, R. R. 1, P. E. I.  
 L. F. Walsh, R. R. 2, Bathurst, N. B.  
 P. H. C. Weaver, Elmsdale, N. S.  
 D. L. Wells, Box 175, Chatham, N. B.  
 Miss L. G. Whiteway, Montague, R. R. 1, P. E. I.  
 R. C. Wilkie, 10 Moulton Avenue, North Sydney, N. S.  
 L. S. Yeo, Charlottetown, R. R. 3, P. E. I.

## SECOND YEAR DEGREE

L. A. Alders, R. R. 1, Kentville, N. S.

D. Allison, Jr., R. R. 3, Florenceville, N. B.  
 G. E. Bailey, 38 Blackett Street, Glace Bay, N. S.  
 H. J. Baird, Box 4204, St. John's, Newfoundland  
 Miss Anita Balodis, R. R. 2, Hopewell, N. S.  
 N. G. Boswall, R. R. 3, Charlottetown, P. E. I.  
 Miss G. C. Boyce, 10 Hillside Avenue, Truro, N. S.  
 E. Butt, Heatherton, Newfoundland  
 K. W. Chandler, North Milton, P. E. I.  
 M. Chasse, R. R. 1, St. Hilaire, N. B.  
 G. V. Comeau, Meteghan River, N. S.  
 D. G. Cowl, Bedford, S. S. I. Site 12, Halifax Co., N. S.  
 W. E. Craig, 42 Southview Avenue, Kentville, N. S.  
 Miss G. K. Crooker, Caledonia, N. S.  
 P. G. Cyr, St. Basile, N. B.  
 J. D. Davidson, R. R. 1, Bass River, N. S.  
 B. A. DeCoste, R. R. 1, Lower Truro, N. S.  
 D. R. Doncaster, 11 Joyce Avenue, Halifax, N. S.  
 Miss D. D. Donnelly, 16 Robinson Street, Lakeburn, N. B.  
 C. F. Everett, R. R. 6, Fredericton, N. B.  
 Miss H. M. Freeman, 22 Dartmoor Crascent, Bedford, N. S.  
 Miss N. E. George, Arichat, N. S.  
 J. F. Grant, Spencer's Island, N. S.  
 R. A. Healey, 17 Hillcrest Drive, Coxheath, N. S.  
 G. P. Howard, Kensington, P. E. I.  
 Miss J. B. Hume, 7 Wildwood Blvd., Dartmouth, N. S.  
 Miss J. A. Illsley, R. R. 1, Moncton, N. B.  
 G. I. Jaikaran, 273 Lamaha Street, Georgetown, Guyana  
 Miss D. M. Langille, R. R. 3, Tatamagouche, N. S.  
 Miss S. E. Leard, Bedeque, P. E. I.  
 P. H. Milburn, Hillsborough, N. B.  
 Miss L. J. Millar, Truro, R. R. 5, N. S.  
 Miss D. J. Morrison, 1096 Prince Street, Truro, N. S.  
 R. D. Mosher, 5371 Duffus Street, Halifax, N. S.  
 L. C. Mueng, P. O. Box 1477, Biera, Portuguese, East Africa  
 L. R. B. Mullegama, No. 119, Rajapihilla Mawatha, Kandy, Ceylon  
 K. M. Murch, Mouth of Keswick, R. R. 1, N. B.  
 B. B. Murray, R. R. 2, Rexton, N. B.  
 M. C. Murray, 22 Reade Street, Moncton, N. B.  
 Miss T. M. Macdonald, Box 169 Albion Street, Stellarton, N. S.  
 A. W. MacKay, Claremont Avenue, Stellarton, N. S.  
 K. T. J. McKendy, 168 St. Andrew St., Bathurst, N. B.  
 D. A. MacLean, P. O. Box 643, Port Hawkesbury, N. S.  
 C. R. MacLeod, 76 Fenwick Street, Dartmouth, N. S.  
 B. MacNeil, Main Street, Florence, N. S.  
 J. H. MacNeil, 181 College Road, Truro, N. S.  
 Miss J. E. Neary, 6 Hilltop Terrace, Apt. 1, Dartmouth, N. S.  
 D. B. Nicholson, Bredalbane, R. R. 2, P. E. I.  
 O. S. Parker, 29 Patillo Avenue, Truro, N. S.  
 Miss E. D. Pattillo, 135 Pleasant Street, Truro, N. S.



D. R. Peck, 8 Elizabeth Street, Dartmouth, N. S.  
 R. M. Peters, P. O. Box 222, Sydney, N. S.  
 Miss S. B. Reid, 5 Pine Street, Bedford, N. S.  
 F. D. Richardson, Vincent Road, Fairvale, N. B.  
 J. W. Rovers, R. R. 1, Afton, N. S.  
 A. P. J. Shaw, R. R. 2, Newport, N. S.  
 A. L. Smith, R. R. 4, Amherst, N. S.  
 G. R. Stewart, Box 732, Woodstock, N. B.  
 D. W. Sutherland, R. R. 6, Truro, N. S.  
 C. N. Thompson, Thompson Road, Oxford, N. S.  
 E. A. Thorne, Havelock, N. B.  
 B. L. Trenholm, R. R. 2, Port Elgin, N. B.  
 J. R. Trenholm, R. R. 6, Moncton, N. B.  
 D. M. Vincent, P. O. Box 57, Curtis Park, Chatham, N. B.

### THIRD YEAR DEGREE

L. H. Anderson, R. R. 1, Port Elgin, N. B.  
 J. H. Anderson, R. R. 3, New Glasgow, N. S.  
 B. McG. Archibald, 50 Vimy Road, Apartment 6, Truro, N. S.  
 F. H. Arsenault, St. Joseph, N. B.  
 W. J. Arsenault, R. R. 2, Traveller's Rest, P. E. I.  
 V. H. Austin, Collingwood, N. S.  
 R. T. Barlow, 101 Exhibition St., Kentville, N. S.  
 D. G. Bishop, 9 Churchill Street, Truro, N. S.  
 B. R. Bohaker, R. R. 2, Granville Ferry, N. S.  
 Miss B. R. Brown, Truro, R. R. 2, N. S.  
 D. A. Browning, R. R. 1, Egerton, N. S.  
 Miss H. M. H. Cmapbell, O'Neil's Road, R. R. 1, North Sydney, N. S.  
 B. G. Clark, R. R. 2, Kilburn, N. B.  
 D. I. Cook, Middle Musquodoboit, N. S.  
 H. A. Crozier, R. R. 3, Summerside, P. E. I.  
 J. E. Dalton, 329 Willow Ave., Summerside, P. E. I.  
 P. M. Dickie, 4 Wyndholme Ave., Dartmouth, N. S.  
 B. H. DuPlessis, 611 Graham Ave., Fredericton, N. B.  
 J. R. Enman, 8 Enman Crescent, Charlottetown, R. R. 7, P. E. I.  
 R. C. Fenerty, R. R. 2, Lower, Sackville, N. S.  
 Miss J. N. Fullerton, Shubenacadie, N. S.  
 M. A. Fullerton, Shubenacadie, N. S.  
 E. Georgeson, R. R. 3, New Glasgow, N. S.  
 M. E. Gourley, 264 deBrullon, Boucherville, P. Q.  
 K. S. Johnson, 8 Dufferin St., Apartment 2, Truro, N. S.  
 W. G. Johnston, R. R. 4, New Glasgow, N. S.  
 H. W. Kolstee, R. R. 1, Brookfield, N. S.  
 L. J. Lawson, R. R. 5, Woodstock, N. B.  
 P. G. Moore, Oxford, N. S.

D. R. Mullin, 15 Metcalf St., Moncton, N. B.  
J. H. J. Murphy, Kensington, R. R. 5, P. E. I.  
B. H. MacDonald, Margaree Valley, N. S.  
E. D. MacIntosh, R. R. 1, Eureka, N. S.  
R. G. Parker, R. R. 2, Pictou, N. S.  
K. G. Peacock, Sandy Point Road, Saint John, N. B.  
J. A. Pierce, R. R. 3, Kingston, N. S.  
M. R. Pierce, R. R. 1, Denmark, N. S.  
D. K. Rushton, C. F. B., Greenwood, N. S.  
D. C. Smith, 401 Dunbar Avenue, New Glasgow, N. S.  
D. W. Smith, R. R. 3, Oromocto, N. B.  
L. A. Somerville, 275 Main Street, Nashwaaksis, N. B.  
J. A. Theakston, 77 Arthur Street, Truro, N. S.  
A. J. Timmons, 47 Heelan Street, New Waterford, N. S.  
W. R. Trenholm, R. R. 2, Port Elgin, N. B.  
Jan Van der Leest, 111 Smith Avenue, Truro, N. S.  
K. A. Veniot, R. R. 2, Bridgewater, N. S.  
G. G. Webster, Cambridge Station, N. S.  
A. A. Weeks, R. R. 4, Hunter River, P. E. I.

## FIRST YEAR TECHNICIAN

D. R. Aiton, 946 Main Street, Sussex, N. B.  
B. D. Beaton, Harbour Center, N. S.  
R. G. Boudreau, Cannes Post Office, N. S.  
M. C. Brooks, Glassville, N. B.  
D. H. Bruce, 220 Brunswick Street, Truro, N. S.  
J. E. Buchanan, Montague, R. R. 3, P. E. I.  
R. M. Caines, Port Saunders, Newfoundland  
N. L. Cairns, North Wiltshire, R. R. 2, P. E. I.  
E. R. Collette, R. R. 2, St. Mary, N. B.  
L. A. Condon, R. R. 1, Granville Ferry, N. S.  
Miss K. C. M. Connolly, Morell, R. R. 2, P. E.  
G. A. Craig, R. R. 1, Charlo, N. B.  
D. S. Crosby, West Royalty, Charlottetown, R. R. 7, P. E. I.  
A. J. Crossman, R. R. 4, River John, N. S.  
L. L. Crouse, 184 Victoria Road, Bridgewater, N. S.  
A. E. Dalton, R. R. 3, Pictou, N. S.  
B. C. Dawson, Cape Traverse, P. E. I.  
E. A. Dixon, 22 Charles Street, Sackville, N. B.  
Miss M. J. Dollar, R. R. 1, Winsloe, P. E. I.  
B. J. Driscoll, Charlottetown, R. R. 5, P. E. I.  
J. M. Farquharson, P. O. Box 75, Kensington, P. E. I.  
C. H. R. Fensom, 5 Weldon Street, Sackville, N. B.  
R. H. J. Fraser, East Quoddy, N. S.  
R. M. Fuller, 229 St. George Street, Sussex, N. B.  
L. J. Gallant, Hunter River, R. R. 2, P. E. I.  
Miss G. R. Gillis, Upper New Harbour, N. S.

P. A. deGraaf, R. R. 1, Port Williams, N. S.  
 W. R. Grace, Port Howe, N. S.  
 F. M. Hanham, 321 Robie Street, Truro, N. S.  
 L. A. J. Harbers, R. R. 3, Wolfville, N. S.  
 B. C. Horne, 213 Victoria Road, Dartmouth, N. S.  
 L. H. How, P. O. 99, Wolfville, N. S.  
 P. F. Howard, 44 White Street, Dartmouth, N. S.  
 Miss W. C. Howatt, Vernon Bridge, P. E. I.  
 Miss B. S. Hyslop, R. R. 1, Dorchester Crossing, N. B.  
 Miss M. Dell, West Street, Westville, N. S.  
 Miss C. M. C. Kelly, 10 Central Avenue, Fairview, N. S.  
 G. W. Kennedy, 13 Elliot Street, Dartmouth, N. S.  
 J. B. Lamb, Berwick, R. R. 2, Kings Co., N. S.  
 W. A. Langille, R. R. 2, Denmark, N. S.  
 D. C. LeGrow, 20 Guy Street, St. John's, Newfoundland  
 H. A. Ling, Winsloe, P. O., R. R. 1, P. E. I.  
 L. R. Marshall, P. O. Box 395, Digby  
 J. Meerburg, Belle River, R. R. 2, P. E. I.  
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 Miss G. E. Melanson, Mill Village, N. S.  
 Miss D. E. Merrill, R. R. 5, Cookshire, Quebec  
 K. A. Milner, R. R. 5, Amherst, N. S.  
 S. D. Moffett, Sussex, N. B.  
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 J. L. Moore, Oxford Junction, N. S.  
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 N. A. MacDougall, 156 Greenwood, Antigonish, N. S.  
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 J. T. McInnis, Cherry Valley, P. E. I.  
 J. D. MacIntosh, 111 MacDonald Street, Truro, N. S.  
 G. G. MacKay, R. R. 4, River John, N. S.  
 G. L. MacLeod, Bonshaw, P. E. I.  
 S. M. Nicholson, Port Morien, N. S.  
 A. J. Overmars, R. R. 3, St. Andrews, N. S.  
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 G. C. Thompson, Rothesay, R. R. 1, N. B.  
 J. M. vanBommel, R. R. 2, Antigonish, N. S.  
 J. A. Vissers, R. R. 2, Stewiacke, N. S.  
 D. F. Walker, Sussex, R. R. 5, N. B.

G. A. Wheaton, Berwick, R. R. 2, N. S.  
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## SECOND YEAR TECHNICIAN

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 J. L. Arsenault, Wellington Station, P. E. I.  
 L. A. Ball, R. R. 1, North Sydney, N. S.  
 L. G. Carter, Berwick, R. R. 2, N. S.  
 J. R. Chisholm, Post Road, Antigonish, N. S.  
 L. D. Cudmore, P. O. Box 1225, Gander, Newfoundland  
 G. J. DeCoste, R. R. 2, Havre Boucher, N. S.  
 W. S. Delaney, Albany, P. E. I.  
 L. C. Demers, 435 Pederson Crescent, Fredericton, N. B.  
 W. B. Dingwell, Morell, R. R. 3, P. E. I.  
 J. S. Driscoll, 379 Maple Avenue, Summerside, P. E. I.  
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 E. V. Fisher, Brookfield, R. R. 3, N. S.  
 R. L. Gallant, Mayfield, P. O., Hunter River, P. E. I.  
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 Miss J. C. Grant, Milford Station, R. R. 1, Hants Co., N. S.  
 A. St.C. Haskins, 2480 Agricola Street, Halifax, N. S.  
 G. F. Hollis, R. R. 3, Oxford, N. S.  
 H. D. Holm, DeSable, Charlottetown, R. R. 2, P. E. I.  
 R. D. Hull, 96 Main Street, Sydney Mines, N. S.  
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 R. L. V. Jeppesen, R. R. 2, New Denmark, N. B.  
 D. W. Kaye, Sussex, R. R. 3, N. B.  
 L. B. Kinsman, Berwick, R. R. 2, N. S.  
 E. Landry, Charlo Station, N. B.  
 K. A. Linton, Box 272, Milltown, N. B.  
 W. R. Linton, Arthurette, R. R. 1, N. B.  
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 T. G. W. Mitchell, Kentville, R. R. 1, N. S.  
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 D. A. McLaughlin, Aroostook, R. R. 1, N. B.  
 G. N. MacPhee, Cornwall, R. R. 1, P. E. I.

D. N. MacSwain, Forest Hill, St. Peter's Bay, P. E. I.  
A. S. Patterson, R. R. 2, Meadowville, N. S.  
G. H. N. Peabody, R. R. 1, Woodstock, N. B.  
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Miss M. Slack, Cole Harbour Road, R. R. 1, Dartmouth, N. S.  
D. W. Steeves, Petitcodiac, N. B.  
J. L. Swift, 20 Park Road, Truro, N. S.  
W. B. Vessey, Charlottetown, R. R. 3, P. E. I.  
I. J. Walsh, Peakes, R. R. 2, P. E. I.

## TECHNOLOGIST

J. F. Ball, R. R. 1, North Sydney, N. S.  
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B. D. Ling, Winsloe, P. E. I.  
D. I. Lockerby, R. R. 5, Kensington, P. E. I.  
M. D. McIntosh, Glassville, N. B.  
Miss M. J. McNamara, Silver Falls, N. B.  
C. W. Purdy, Malagash, R. R. 1, N. S.  
Miss M. A. Quinn, 34 George Street, New Waterford, N. S.  
Miss M. A. Scott, R. R. 1, New Glasgow, N. S.  
Miss S. J. Stevenson, Winsloe, P. E. I.  
G. E. Swallow, St. Peter's Bay, R. R. 2, P. E. I.  
J. A. Tattrie, Farr Avenue, Sharon, Ontario

## SPECIAL STUDENTS

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R. J. W. Mingo, Denmark, R. R. 2, N. S.  
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