

NOVA SCOTIA AGRICULTURAL COLLEGE

1969 - 1970



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..... Religious Denomination.....
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 1967-68 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 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 practical farm 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

SIXTY-FOURTH ANNUAL

CALENDAR

OF THE

NOVA SCOTIA
AGRICULTURAL COLLEGE
TRURO

UNDER

The Nova Scotia Department
of Agriculture and Marketing

1969 - 1970

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1969

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	4	5						1	2		1	2	3	4	5	6
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13	14	15	16	17	18	19	10	11	12	13	14	15	16	14	15	16	17	18	19	20
20	21	22	23	24	25	26	17	18	19	20	21	22	23	21	22	23	24	25	26	27
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							31													

OCTOBER							NOVEMBER							DECEMBER						
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19	20	21	22	23	24	25	16	17	18	19	20	21	22	21	22	23	24	25	26	27
26	27	28	29	30	31		23	24	25	26	27	28	29	28	29	30	31			
							30													

1970

JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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11	12	13	14	15	16	17	15	16	17	18	19	20	21	15	16	17	18	19	20	21
18	19	20	21	22	23	24	22	23	24	25	26	27	28	22	23	24	25	26	27	28
25	26	27	28	29	30	31								29	30	31				

APRIL							MAY							JUNE						
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19	20	21	22	23	24	25	17	18	19	20	21	22	23	21	22	23	24	25	26	27
26	27	28	29	30			24	25	26	27	28	29	30	28	29	30				
							31													

CALENDAR FOR SESSION 1969-1970

1969

August 25	Refresher course commences at 1:30 p.m.— First year Technician students
September 8-10	Supplemental examinations
September 10	Registration—First year students
September 11	Registration— Second and third year students
October 13	Thanksgiving day. No classes
December 10	Last day of classes, first term
December 11-19	First term examinations

1970

January 5	Second term lectures begin at 8:30 a.m.
March 27-30	Easter weekend. No classes
April 22	Last day of classes, second term
April 23 - May 1	Final Examinations
May 6	Graduation exercises

Trueman House and Chapman House will be open as follows:
—for students who have to write a supplemental examination, after dinner on September 7;
—for all others, after dinner on September 9.

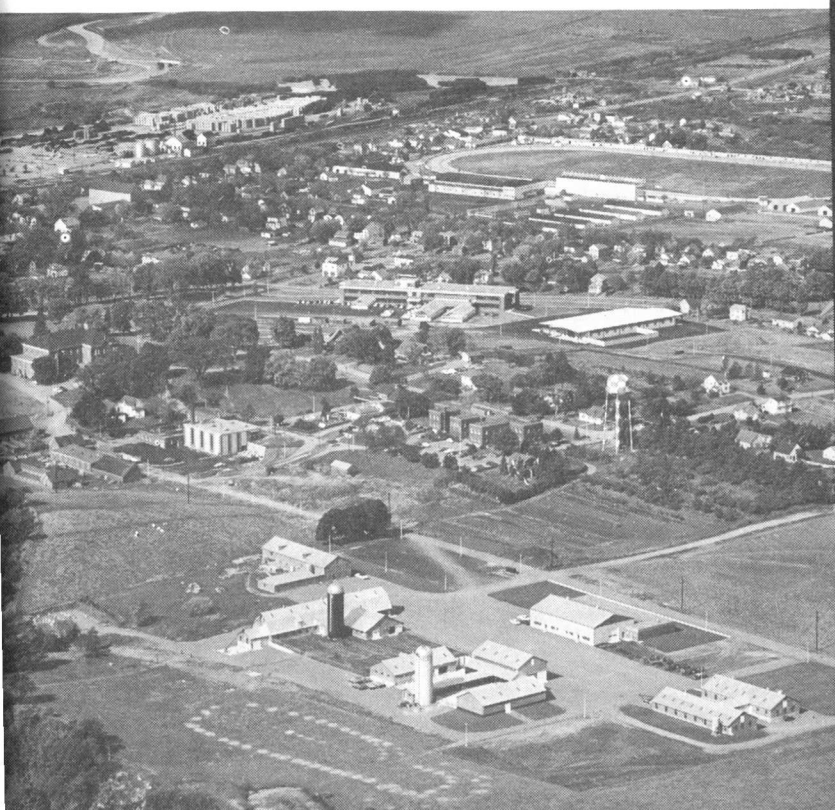
For refresher course students. Chapman House will be open August 24.

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

Registration consists of presenting a medical certificate dated not more than thirty days before registration day, and of paying fees and tuition and, if applicable, the first board and lodging instalment. No student will be registered without fulfilling these requirements and no student who is not registered will be permitted to attend classes.

A student who registers late must have permission from the Principal and will be required to pay a penalty of \$5.00 per day for each day he is late.

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. (Punjabi), Dip.L.Sc.
(Punjab)

Dean of Residence—Chaplain

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

Assistant Professor

L. T. RUSSELL, B.Eng. (Nova Scotia Technical College), M.Sc. (Queens)

Visiting Lecturer

R. C. GILKIE, B.Sc. (Dalhousie), B.Eng. (N. S. Technical College), M.Eng. (N. S. Technical College), Ph.D. (University of London)

Visiting Lecturer

Agronomy

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

M. K. Padmanathan, B.Sc. (Madras), B.Sc. (Agric.) (Colombo), M.Sc. (Pennsylvania State)

Assistant Professor

Animal and Poultry Husbandry

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

Associate Professor

D. R. MacDONALD, B.Sc. (Agr.) (McGill)

Assistant Professor

W. G. MATHEWSON, B.Sc. (Aberdeen)

Lecturer

R. J. HUGGARD, B.Sc. (Agr.) (McGill), M.S. (Illinois)

Lecturer (on Loan)

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

Visiting Lecturer

G. C. Illsley, 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

P. A. BAMFORD, B.Sc. (Agr.) (McGill)

Lecturer

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)

Lecturer

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

P. R. GERVASON, B.A. (Acadia), M.A. (Alberta)

Lecturer (on loan)

T. C. GUNN, B.Sc. (Agr.) (McGill), M.Sc. (Connecticut)

Lecturer (on loan)

English and Social Sciences

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

Associate Professor

W. J. HAWKINS, B.A. (St. Mary's), M.A. (New Brunswick)

Assistant 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

Horticulture

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

Associate Professor

Mathematics and Physics

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

Assistant Professor

S. G. SMITH, B.Sc. (Mt. Allison)

Lecturer

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

Assistant Professor

Physical Education

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

Lecturer

C. J. Fox, B.A. (Acadia), B.Ed. (Acadia)

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 10, 1969

Tuition	\$175.
Board and lodging	\$290.
Caution deposit	\$ 10.
Students' Council	\$ 30.

	\$505.

Payments due January 5, 1970	
Tuition	\$175.
Board and lodging	\$350.

	\$525.
Books (estimated), September 10, 1969	\$ 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 10, 1969	
Board and lodging	\$290.
Caution Deposit	\$ 10.
Students' Council	\$ 30.

	\$330.

Payments due January 5, 1970	
Board and lodging	\$350.
Books (estimated), September 10, 1969	\$ 65.

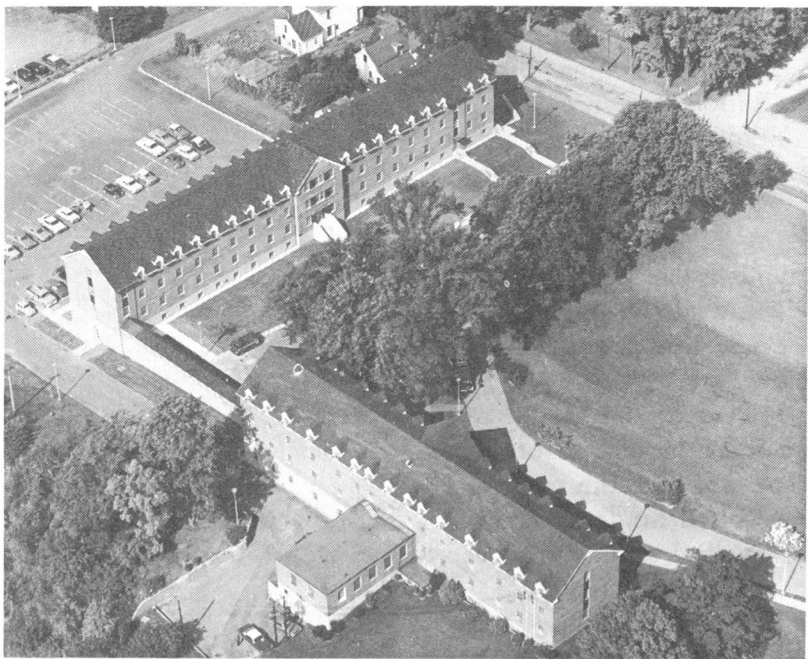
Due to the fact that some provinces will be providing medical insurance before the 1969-70 academic year begins and some will not, the medical services previously arranged for by the United Students' Council will require revision. No amount for medical services has been included, therefore, in the above schedule of payments.

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 1969-70, credits towards a degree in Agriculture, technician courses, technologist courses and vocational short courses will be offered.

During the sixty-three 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.

Commencing in 1969, graduates of the pre-engineering course at the Nova Scotia Agricultural College will be admitted without further examination by the Nova Scotia Technical College to the second last year of a course leading to the degree of Bachelor of Engineering with specialization in Agricultural Engineering.

Commencing in 1969, 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-three 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 and Chapman House provide living accommodations for approximately 300 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 1969-70 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

Railways:

Truro is on the main line of the Canadian National Railways from Halifax to Moncton, and from Sydney to Halifax. Truro is also the terminus of the Yarmouth to Truro Dominion Atlantic Railway which serves the Annapolis Valley.

Highways:

Provincial Highways 2 and 4 lead to Truro from North, South, East and West, and the Trans Canada Highway passes through the outskirts of the town. Number 1 Highway joins Number 2 Highway at Bedford, near Halifax.

Bus Lines:

The Acadian Coach Lines maintains a bus terminal and ticket office at Truro.

Banks:

The following chartered banks have branches in Truro:

The Bank of Nova Scotia

The Canadian Imperial Bank of Commerce

The Royal Bank of Canada

The Bank of Montreal

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 Dean of Residence.

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 at or near the residence must register the ownership of the vehicle, together with its license number, with the Dean of Residence at the opening of the academic year, or within three days after the vehicle is brought to the campus.

Limited parking space on campus is provided for student-operated vehicles west of Chapman House for a fee of two dollars (\$2.00) annually. Students are required to observe campus traffic and parking regulations. Fines are levied by the Students' Council for failure to comply with campus regulations.

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:

Protestant—

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

Roman Catholic—

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 Registrar's office. 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 time-table or announced by the instructor. The members of the Faculty believe that a student should for his own good, miss as few instructional periods as possible.

A student who arrives late or who is inattentive during an instructional period may be refused credit for attendance.

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

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

Authorized absences for students for College activities will be credited toward the required attendance.

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

Every student is expected to show, both within and

without the college, such respect for order, morality and the rights of others and such sense of personal honour as is demanded of good citizens. Students found guilty of immoral, dishonest or improper conduct, violation of rules, or failure to make satisfactory progress, shall be liable to college discipline including: suspension from classes or residence, disqualification from competing for honours or prizes or withdrawal from the College.

Keeping in mind the responsibility of students one to the other, intoxicating liquors are strictly prohibited on College property.

All forms of initiation and hazing are forbidden.

RESIDENCE REGULATIONS

Students must not remove glasses, silver, dishes, or any articles of furniture from the dining hall.

For the noon and evening meals on Sunday, students are required to wear a coat (jacket or blazer), and a dress shirt and tie. For noon and evening meals on week days, students must wear a sweater or coat. Details of dress regulations will be contained in the Students' Council Handbook, a copy of which will be provided to all students.

Smoking is not permitted in the Dining Room.

Nothing (pictures, banners, etc.) is to be attached to the walls of any College building.

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.

All clothing and towels should be marked with the owner's name.

A laundry room is available for the use of students. This room is equipped with washing machines, driers, set tubs, irons and ironing boards. No laundry will be permitted in the wash-rooms or bedrooms.

Each room is provided with a broom and dust pan. It will be the responsibility of the student to keep his room clean and tidy at all times. Rooms will be inspected periodically.

No firearms are permitted on College property.

Students wishing to entertain visitors in the dining hall must purchase meal tickets from the Business Manager's office before the meal starts.

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

Students living out of residence must obey all residence rules while visiting in the dormitory.

No student may bring a lady beyond Trueman House Common Room without first obtaining permission from the Dean of Residence.

REGISTRATION DEPOSIT

All 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 July 31 and new students as soon as they are accepted for admission.

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 3.

CAUTION DEPOSIT

Every student, at time of registration, must make a cash deposit of \$10.00 with the Registrar to cover breakage. As soon as any student's deposit is exhausted, he or she will be required to make an additional deposit of the same amount.

Should any student, or students, destroy or deface college property, the cost of repairing such damage will be the responsibility of the student or students concerned.

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.

MEDICAL EXAMINATION

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 diseases, 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:

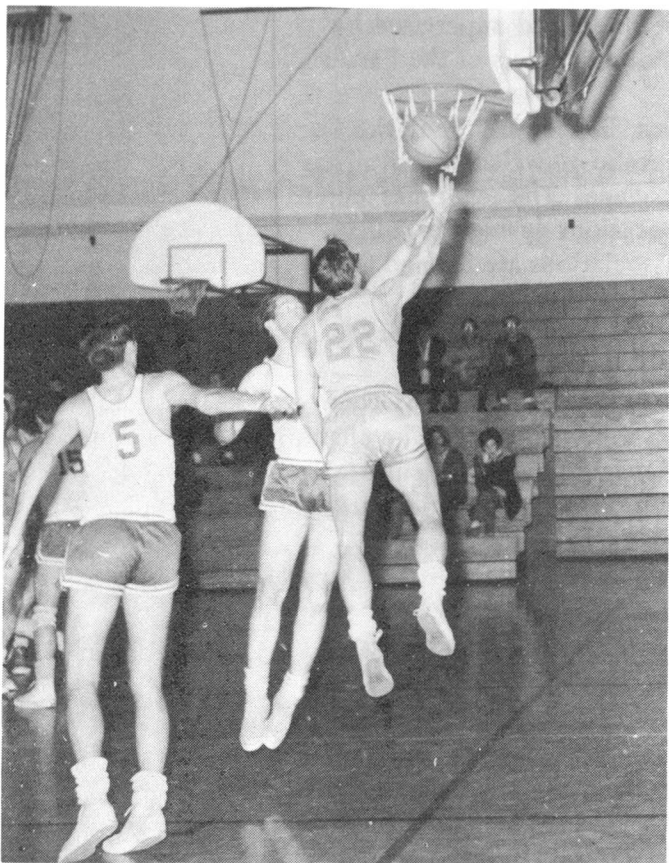
(a) Intramural athletics. The intramural program continues throughout the year with units of competition formed on a class basis. A variety of sports is offered including softball, soccer, hockey, basketball, and volleyball.

(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 compulsory program of "education through the physical". All first year male students will be required to attend two classes per week.

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, about the middle of the Second Term, 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
COURSE



DEGREE COURSE

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 junior 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. Commencing in 1969, 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 Science, Wildlife and Fisheries, Land Management and Soil Science.

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 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 made an average of at least eighty per cent and an honours diploma to a student who has made an average of at least seventy-five per cent.

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 a certificate of junior matriculation standard.
(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.

*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 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 a confidential report form. SACU or similar tests will not be required in 1969 but results of such tests will be considered and should be submitted if the candidate has taken them. Candidates for admission in 1970 will be encouraged to take the SACU or similar tests.

ADMISSION WITH ADVANCED STANDING

A candidate may be admitted to the second year of the course leading to a degree in Agriculture if he has (1) completed all the entrance requirements for the first year, and (2) has attained an average of at least 65% in senior matriculation English, Mathematics, Chemistry, a second science, and one additional subject and a mark of not less than 65% in English, Mathematics and Chemistry. A candidate so admitted will be required to take first year Biology in addition to the regular work of the second year.

Farm experience is desirable for all applicants and is a requirement for some options of the final two years.

SUPPLEMENTAL EXAMINATIONS

A student who fails in more than three full courses or who makes an average of less than fifty per cent on the work of an academic year may not write supplemental examinations.

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.

SYLLABUS FIRST YEAR DEGREE

	First Lec.	Term Lab.	Second Lec.	Term Lab.
Biology 100	3	4	3	4
Chemistry 100	3	4	3	4
English 100	4		4	
*English 220			3	
History 100	3		3	
or				
Sociology 100	3		3	
Mathematics 100	3		3	
Physics 100 (Engineers only) . .	3	4	3	4
Physical Education	2		2	

*Required of a student entering the first year with a credit in English 100 on a basis of a senior matriculation mark.

SECOND YEAR DEGREE

(leading to a Bachelor of Science degree in Agriculture)

	First Lec.	Term Lab.	Second Lec.	Term Lab.
*Biology 110	3	4		
Biology 210	3	4		
Biology 220			3	4
Chemistry 200	3	4	3	4
Economics 200	3		3	
History 220			2	
Mathematics 200	3		3	
Physics 200	3	4	3	4

*Offered to students who enter with advanced standing.

SECOND YEAR DEGREE

(leading to a Bachelor of Engineering degree with
specialization in Agricultural Engineering)

	First Lec.	Term Lab.	Second Lec.	Term Lab.
Chemistry 200	3	4	3	4
Economics 200	3		3	
Engineering 200	1	3	1	3
Engineering 201	2	1	2	1
Engineering 210	2			
Engineering 211	1	2		
Engineering 220			2	2
History 220			2	
Mathematics 200	3		3	
Physics 201	3	4	3	4

THIRD YEAR DEGREE

(leading to a Bachelor of Science degree in Agriculture)

	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 310	3			
Mathematics 320			3	
Plant Science 310	3	1		
Soil Science 310	3	2		
Biology 320			3	2
or				
Mathematics 321			3	

THIRD YEAR DEGREE

(leading to a Bachelor of Engineering degree with
specialization in Agricultural Engineering)

	First Lec.	Term Lab.	Second Lec.	Term Lab.
Animal Science 320			3	2
Chemistry 301	3		3	
Economics 310	3			
Engineering 300	2	1	2	1
Engineering 301	2	1	2	1
Engineering 310	2	1		
Engineering 311	2			
Engineering 320			2	1
Engineering 321				2
Mathematics 300	3		3	
Plant Science 311	2	2		
Physics 300	2	2	2	2
Soil Science 310	3	2		

DESCRIPTION OF COURSES

The following courses are arranged for the 1969-70 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

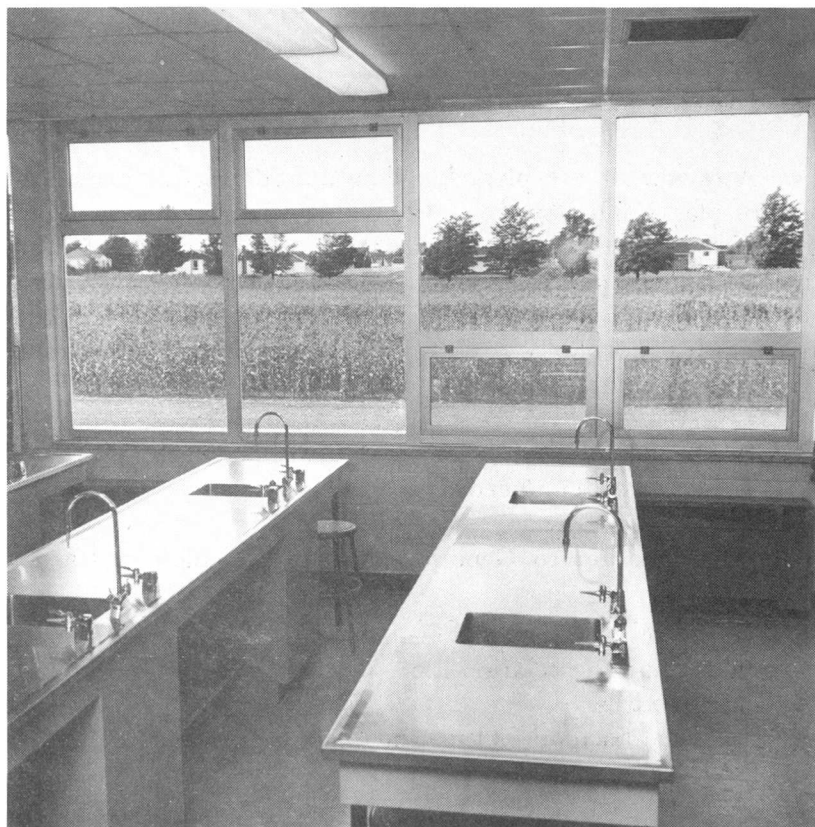
A study of life in terms of modern concepts of molecules, ionization, reactions, structures and processes: photosynthesis, organic compounds, energy relations, the cell, tissues, organs, systems, organisms and societies; plant and animal structure, basic metabolism, nutrition, growth, perception, reproduction, introduction to embryology, ecology, genetics and evolution. Higher animals and plants are emphasized and a brief introduction to the plant and animal kingdoms is given.

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

Text: Weisz, ELEMENTS OF BIOLOGY.

110: Basic Biology

A review of the cell and its organelles; metabolism and energy relations; growth and reproduction; genetics, evolution and ecology. The basis of life in terms of molecules and their various interactions is emphasized. The structure of higher plants and animals is briefly considered. This course is for students entering at the second-year level.



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

Texts: FOUNDATION OF MODERN BIOLOGY SERIES: The Cell, Cellular Physiology and Biochemistry, Life of the Green Plant. Storer and Usinger, GENERAL ZOOLOGY.

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: to be announced.

310: Introduction to Genetics (Prerequisite—Biology 100 or Biology 110).

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: To be announced.

311: Microbiology (prerequisite—Biology 100 or Biology 110)

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, 1st 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.

321: Cell Physiology

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

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

Text: To be announced.

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, complexions and an introduction to organic chemistry are subjects studied in the second semester of this course.

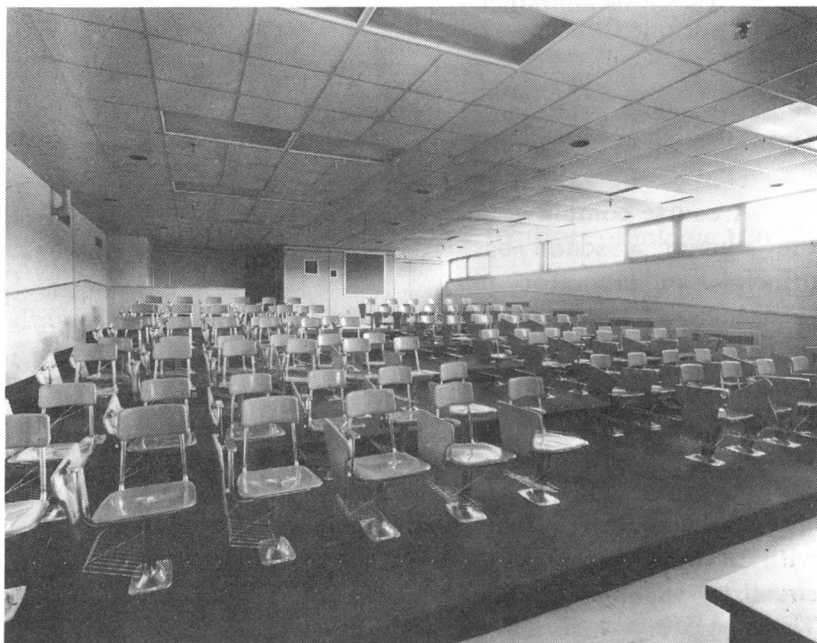
The laboratory work is mainly quantitative in its approach with an introduction to qualitative analysis as an aid to solution chemistry involving a short period in the laboratory schedule. The laboratory work is correlated with lecture material to assist the student in relating theory and practice.

1st year, both terms—3 lecs. and 4 labs. per week.
Text: Quagliano; CHEMISTRY (3rd. Edition)
Laboratory manual—mimeographed outlines.

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).

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 to be selected.

Laboratory—EXPERIMENTAL BIOCHEMISTRY, J. M. Clark, Jr.

301: Introductory Biochemistry (Prerequisite—Chemistry 200)

The same course, without laboratory practice, as Chemistry 300. (For Engineering students only.)

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

ECONOMICS

200: Principles of Economics

This course is an introduction to the study of Economics. It is designed to acquaint the student with the main elements of economic theory, and their application and relevance in our complex modern society. Major sections of the course are: Basic Concepts, together with Straight Thinking in Economics; National Income, Employment and Economics Growth; the Price System and the Allocation of Resources; International Trade; Money, Banking and Public Finance.

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

Text: Bach, ECONOMICS.

310: 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, 1st term—3 lecs. per week.

Text to be assigned.

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 term—1 lec. and 3 labs. per week.

Text: To be announced.

201: Statics

This course deals with a study of forces, force components moments, couples and the resultant and equilibrium of a force system in two and three dimensions, as well as shear and bending moments in a beam. Centroids of lines, areas and volumes as well as the associated moments of inertia are determined. Analytical and graphical solution methods are used and an introduction to vector methods is included.

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

Text: Higdon and Stiles: ENGINEERING MECHANICS Volume 1 Vector Edition, Prentice-Hall 1962.

210: Farm Structures

Introduction to basic farm structural design and specifications, layouts and plans, environmental conditions and functional requirements of structures for product storage and livestock. Including construction methods and material standards.

2nd year, 1st term—2 lecs. 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 cost associated with different management systems will be investigated. Some of the common welding techniques will be illustrated.

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

Text: Smith: FARM MACHINERY AND EQUIPMENT.

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

220: Surveying

This course covers the use and adjustment of surveying instruments. Measurements of distance, differential and profile levelling exercise 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: To be announced.

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 & Weese—MECHANICS OF MATERIALS second edition, Wiley, 1968.

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, Prentice-Hall 1962.

310: Fluid Mechanics—(Prerequisite Mathematics 200)

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

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

Text: To be announced.

311: Power Units

A study of the various types of spark ignition and compression ignition engines currently used in tractors. A comparison of the effectiveness of various transmission and weight transfer systems is made. The advantages and disadvantages of the different types of electric motors will be investigated.

3rd year, 1st term—2 lecs. per week.

Text: Jones, FARM GAS ENGINES AND TRACTORS.

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 for powered units.

3rd year, 2nd term—2 lecs. and 1 lab. per week.

Text: Saad, THERMODYNAMICS FOR ENGINEERS, Prentice-Hall 1966.

321: Seminar

The preparation, presentation and discussion of current Agricultural Engineering topics by students, staff and prominent engineers.

3rd year, 2nd term—2 labs. per week.

References: American, British and Canadian Agricultural Engineering Journals and other scientific journals.

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.

220: Twentieth century Canadian authors with emphasis on research and scholarly writing.

This course is required of first year students who have been granted a credit for English 100 on the basis of senior matriculation in that subject.

1st year, 2nd term—3 lecs. per week.

Texts: Turabian, K. L., A MANUAL FOR WRITERS OF TERM PAPERS, THESES AND DISSERTATIONS .

Additional texts to be assigned.

HISTORY

100: Canadian History

Emphasis on constitutional and economic aspects.

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

Text: Creighton, DOMINION OF THE NORTH.

220: 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, 2nd 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: To be announced.

300: Advanced Calculus for engineering students—(Prerequisite—Mathematics 200)

Vectors, matrices, partial differentiation, line and multiple integrals, Taylor's series and Fourier's series, ordinary differential equations. These topics, particularly differential equations, will be considered at greater depth than in Mathematics 320.

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

Text: Fisher and Ziebar, CALCULUS AND ANALYTIC GEOMETRY Boyce and DiPrima, ELEMENTARY DIFFERENTIAL EQUATIONS.

320: Elementary Statistics (Prerequisite—Mathematics 100)

Measures of central tendency and variability; normal frequency curve; tests of significance of differences between means; non-parametric methods; regression and correlation; binomial; Poisson and Chi-square distributions, sampling, simple analysis of variance.

3rd year, 2nd term—3 lecs. per week.

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.

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—2 lecs. per week.

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: To be announced.

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: Electricity and Magnetism (Prerequisite—Mathematics 200)

A course for students who have studied general physics and have taken one year of calculus.

The course will cover the physics and mathematics of electric forces and fields, electric potential, capacitance and dielectric theory, direct current circuit analysis, resistance and potential measurements, magnetic fields and electromagnetic induction, alternating currents and analysis of circuits carrying sinusoidal currents. The influence of electric and magnetic fields on ions will also be treated, as well as an introduction to electronics.

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.

Textbook to be announced.

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.

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 problem of
cultivation and harvesting of these crops.

3rd year, 1st term—2 lecs. and 2 labs

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

SOCIOLOGY

100: Introduction to Sociology

This course will use the disciplines of
Psychology and Sociology to give students
insight into themselves, their society and the world in
terms of their responsibilities to all three. Some
emphasis will be placed on looking at group relationships. A major part
of the course will be a comprehensive analysis of the student's
own society.

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

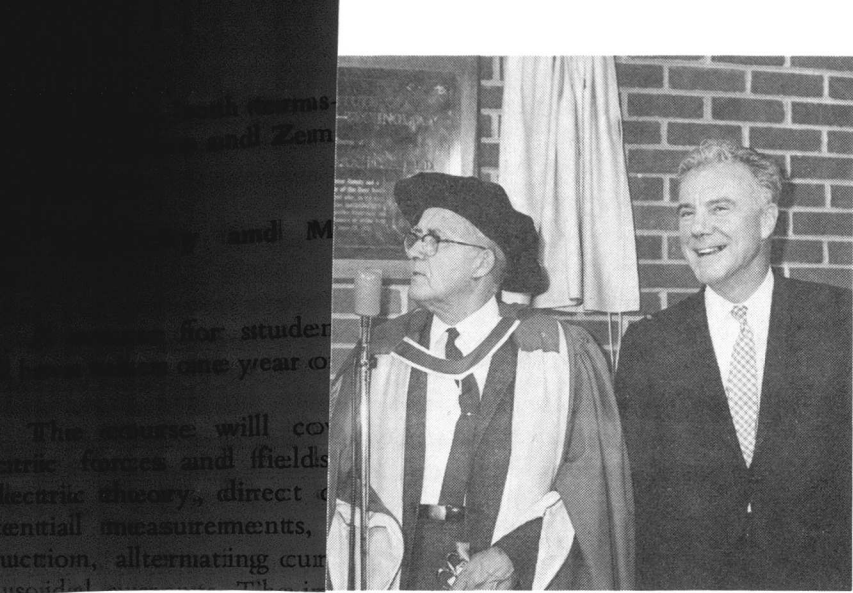
Texts: Shinn, *THE TANGLED WORLD*; *THE HOLY BIBLE* Revised Standard Version; Griffin, *BLACK LIKE ME*; Harris, *THE JUNKIE PRIEST*; Berton, *THE SMUG MINORITY* and other assigned readings.

SOIL SCIENCE

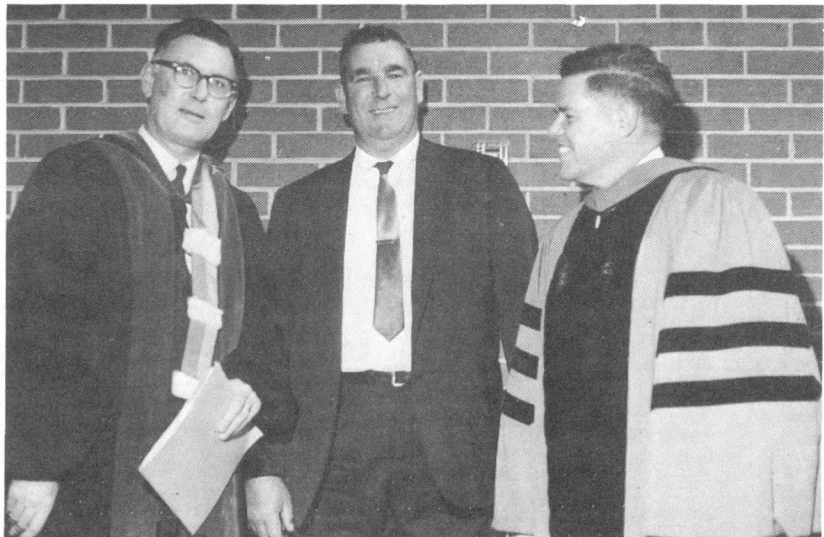
310: Introduction to Soil Science

An introductory course dealing with the general principles
of soil science, including origin, development and classification,
chemical and physical properties related to crop production,
soil conservation and land use.

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



Hon. Alan MacEachern, Dr. Kenneth Cox and the Hon. Harvey Veinot at the opening of the Cox Institute of Agricultural Technology.



Dr. George Dion, Hon. Daniel MacDonald and Dr. W. A. Jenkins at the Autumn Assembly.



TECHNICIAN
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 of a provincial or high school pass in English, Mathematics, one science, and two other subjects at the Nova Scotia Grade XI, New Brunswick Grade XII, Prince Edward Island Grade XII or Newfoundland Grade XI levels.

Candidates from both the academic and general courses are considered for admission. 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."

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 25 to September 9. The additional cost will be for board and lodging only.



Supplemental Examinations

A student in a Technician Course may write supplemental examinations in a maximum of three subjects if his combined average for all subjects is above 50% and the mark in the failed subject (s) is above 30%.

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.

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

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 Vocational Education, Department of Education, Charlottetown, by September 15th. 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 11 (a)	Orientation	1			
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 10	Accounting and Financial				
	Records	2	1	3	
AB 11 (b)	Principles of Marketing			1	2
	Physical Education	2		2	
AB 12 (b)	Work Simplification—one week				

PERIOD OF IN-SERVICE-TRAINING

At least three months of in-service training prior to the commencement of the second academic year will be arranged by the College for each student, who will be placed as a trainee on a farm or in a farm related business of a type corresponding to his interests. He will earn a salary during the in-service training.

SECOND ACADEMIC YEAR

		First Lec.	Term Lab.	Second Lec.	Term Lab.
E 20	Human Relations	3		3	
AB 20	Business Management	2	4	2	2
AB 21 (a)	Applied Marketing	one day/week			
AB 22 (b)	Agricultural Policy			3	
AB 23 (a)	Government and Law	2	2		
AE 20	Power and Machinery	2	2	2	2
PS 20	Field Crops Production	2	2	2	2
	One of the following:				
AS 20 (a)	Livestock Production	2	4		
PS 21 (a)	Vegetable Production	2	4		
	One of the following:				
AS 20 (b)	Animal Nutrition			2	4
PS 21 (b)	Fruit Production			2	4
	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 11 (a)	Orientation	1			
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 (a)	Economics	3			
AB 11 (b)	Principles of Marketing			1	2
AS 10 (b)	Breeds and Breed History			2	2
	Physical Education	2		2	
AB 12 (b)	Work Simplification—one week				

PERIOD OF IN-SERVICE TRAINING

At least three months of in-service training prior to the commencement of the second academic year will be arranged by the College for each student, who will be placed as a trainee on a farm or in a farm related business of a type corresponding to his interests. He will earn a salary during the in-service training period.

SECOND ACADEMIC YEAR

		First Lec.	Term Lab.	Second Lec.	Term Lab.
E 20	Human Relations	3		3	
PS 20	Field Crops Production	2	2	2	2
AS 21	Processing	3		3	
AE 20	Power and Machinery	2	2	2	2
AS 20 (a)	Livestock Production	2	4		
AS 22 (b)	Advanced Livestock Production			3	
AS 23 (a)	Animal Physiology	3			
AS 23 (b)	Animal Pathology			3	
AS 24 (b)	Animal Breeding			2	
AS 20 (b)	Animal Nutrition			2	4
	Projects				
C 20	Chemistry*	2	4	2	4
M 20	Physics*	2	3	2	3

*Students who wish to qualify for admission to a third year leading to a diploma as a Biology or Chemistry Laboratory Technologist must elect Chemistry and Physics instead of Power and Machinery and Advanced Livestock Production.

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 11 (a)	Orientation	1			
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 (a)	Economics	3			
AB 11 (b)	Principles of Marketing			1	2
B 11 (b)'	Entomology			3	
	Physical Education	2		2	
AB 12 (b)	Work Simplification—one week				

PERIOD OF IN-SERVICE TRAINING

At least three months of in-service training prior to the commencement of the second academic year will be arranged by the College for each student, who will be placed as a trainee on a farm or in a farm related business of a type corresponding to his interests. He will earn a salary during the in-service training period.

SECOND ACADEMIC YEAR

		First Lec.	Term Lab.	Second Lec.	Term Lab.
E 20	Human Relations*	3		3	
B 20	Botany*	2	2	2	2
PS 22	Plant Propagation*	1	2	1	2
B 21	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
AB 24 (b)	Credit Management**			2	2
AE 21 (b)	Electrical Controls**			2	2
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	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.



AGRICULTURAL ENGINEERING SYLLABUS
FIRST ACADEMIC YEAR

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.

		First Lec.	Term Lab.	Second Lec.	Term Lab.
E 11 (a)	Orientation	1			
E 10	English	3		3	
M 10	Applicable Mathematics	3		3	
C 11 (a)	Soils	2	2		
AB 11 (a)	Economics	3			
AB 11 (b)	Principles of Marketing			1	2
M 11	Physics	1	2	1	2
AE 11	Mechanics of Materials		2		2
AE 12	Drafting		2		2
PS 10	Plant Science	2	2	2	2
AE 13	Shopwork	2	4	2	4
AE 14 (b)	Soil and Water Management			1	2
AB 12 (b)	Work Simplification—One Week				
	Physical Education	2		2	

PERIOD OF IN-SERVICE TRAINING

At least three months of in-service training prior to the commencement of the second academic year will be arranged by the College for each student, who will be placed as a trainee in work that corresponds to his interests. He will earn a salary during the in-service training.

SECOND ACADEMIC YEAR

		First Lec.	Term Lab.	Second Lec.	Term Lab.
E 20	Human Relations	3		3	
AE 22	Farm Structures	2	4	2	4
AE 23	Farm Power	2	4	2	4
AE 24	Farm Machinery	2	4	2	4
AE 25 (a)	Hydraulics	2	2		
AE 21 (b)	Electrical Controls			2	2
AS 20 (a)	Livestock Production	2	4		
	Projects				

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.

AB 10: Accounting and Financial Records

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.

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

AB 11 (a) Economics

The development of the Canadian Agricultural Industry is studied with special emphasis on the structure of agriculture within the Atlantic economy. The decision making process by various types of business units is analysed with particular emphasis on the wise use of inputs.

Ag. Eng., An. Sc., Pl. Sc., 1st year, 1st term—3 lecs. per week.

AB 11(b) Principles of Marketing

The importance and costs of each function comprising the entire marketing process are examined. Domestic and export distribution systems for several agricultural commodities are noted. The course also includes a study of consumer and supplier behaviour, pricing, and price stability in various types of market structures, an examination of the various kinds of business firms involved with marketing decisions, and the administration of grading and inspection systems are also covered.

Ag. Eng., An. Sc., Pl. Sc., Agr. Bus., 1st year, 2nd term—1 lec. and 2 labs. per week.

Text: 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 impor-

tant factors.

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

AB 20: Business Management

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.

AB 22 (b): Agricultural Policy

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

Responsibilities of local, provincial and federal levels of governments and government agencies are examined. Several legal considerations in the transfer of property and in the formation of partnerships and companies are also studied.

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

AB 24 (b) : Credit Management

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

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

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: Mechanics 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, both terms—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—2 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—2 lecs. and 4 labs. per week.

AE 14 (b): 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, irrigation equipment and solving associated problems.

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

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—2 lecs. and 2 labs. per week.

AE 22: Farm Structures

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 differentials 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 (a): 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, 1st term—2 lecs. and 2 labs. per week.

AS 10 (b): Breeds and Breed History

The characteristics, history, policies and programs of the various breeds of farm animals are studied. Other topics include identification and registration, pedigrees, judging, grading, classifying and scoring of breeding stock, market animal evaluation, and correlation of type and yield.

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

AS 20 (a) : Livestock Production

A general survey of the dairy, red meat and poultry industries is made. Topics covered in the lectures include the genetic derivation of domestic farm animals, the characteristics and development of the various breeds of farm animals, the policies and programs of the breed associations, the identification and registration of farm animals and the preparation of pedigrees. Topics covered in the laboratory periods include judging, grading, classifying and scoring of breeding stock, market animal evaluation and correlation of type and yield.

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

AS 20 (b): 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.

Agr. Bus., An. Sc., 2nd year, 2nd term—2 lecs. and 4 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—3 lecs. per week.

Reference Texts: Buckman and Brady, THE NATURE AND PROPERTIES OF SOILS; Bauer, SOIL PHYSICS;

Emmons, Allison, Stauffer & Thiel, GEOLOGY.

Laboratory Manuals: Foth and Jacobs, AN INTRODUCTION TO SOIL SCIENCE; MIMEOGRAPHED LABORATORY PROCEDURES.

AS 22 (b): Advanced Livestock Production

This is an advanced study in livestock production with special reference to the problems in the industry: breeding, selection, housing, feeding and marketing. Practical work with animals and poultry in feeding, selection and general management is included.

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

AS 23 (a) : Animal Physiology

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.

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

AS 23 (b): Animal Pathology

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, 2nd term—3 lecs. 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, 2nd term—2 lecs. 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—3 lecs. per week.

B 20: Botany

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.

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, both terms—2 lecs. and 2 labs. per week.

B 21: 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, both terms—2 lecs. per week.

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 Biochemistry. 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: Frey—COLLEGE CHEMISTRY—(3rd edition)

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

Suggested Reference Books:

1. Quagliano—CHEMISTRY (3rd edition)
2. Siebring—CHEMISTRY (1967)
3. Sturchio, et al—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 Text: Donahue, Millar, Turk and Foth—**FUNDAMENTALS OF SOIL SCIENCE.**

Lab Manual—Mimeographed Laboratory Procedures.

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: Hart and Schuetz, LABORATORY MANUAL FOR ORGANIC CHEMISTRY.**

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.

E 11 (a) Orientation

This is an introduction to the function of the college and life on campus, as well as an introduction to various types of farm and farm related business.

Ag. Eng., Agr. Bus., An. Sc., Pl. Sc., 1st year, 1st term—1 lec. per week.

E 20: Human Relations

This course will use the disciplines of Theology, Psychology and Sociology to give students an understanding of themselves, their society and the world in which they live and their responsibilities to all three. Some time will be spent in looking at group relationships. A major part of the course will be a comprehensive analysis of the students' home community.

This course is equivalent to and may be claimed as a credit for Sociology 100 (Degree Course).

Texts: Shinn, THE TANGLED WORLD; THE HOLY

BIBLE Revised Standard Version; Griffin, BLACK LIKE ME; Harris, THE JUNKIE PRIEST; Berton, THE SMUG MINORITY and other assigned readings.

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

M 10: Applicable Mathematics

The essentials of algebra, geometry and trigonometry are covered. Considerable emphasis is also placed on measurement systems, ratios, proportions, percentages, and financial considerations such as simple interest, compound interest, and consumer loans.

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

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—1 lec. and 2 labs. per week.

M 20: Physics

This course emphasizes the fundamentals of light, electricity and magnetism, basic electronics, heat and atomic and nuclear physics, with only sufficient mechanics as are 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 3 labs. per week.

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, both terms—2 lecs. per week.

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.

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.

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.

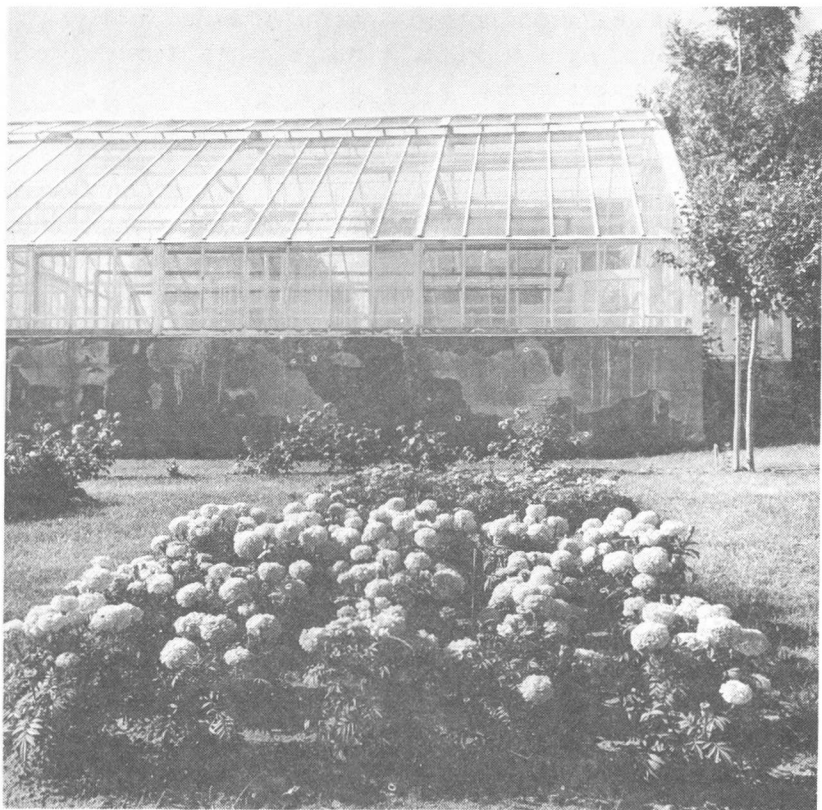
Agr. Bus., Pl. Sc., 2nd year, 2nd term—2 lecs. and 4 labs. per week.

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.

II TECHNOLOGY COURSES

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.

Each program of study must contain at least two full year subjects, projects, and considerable laboratory experience.

The required subjects may include the following:

- (a) Advanced Business Management, AB 30,
- (b) Sociology, E 30,
- (c) Selected second year subjects from Technician courses,
- (d) Selected subjects from Degree Course for which prerequisites are met,
- (e) or new subjects for which there is sufficient demand.

"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.

DESCRIPTION OF COURSES

The following courses are arranged for the 1969-1970 academic year. The Faculty reserves the right to make any revisions or additions which may be necessary.

AB 30: Advanced Business Management

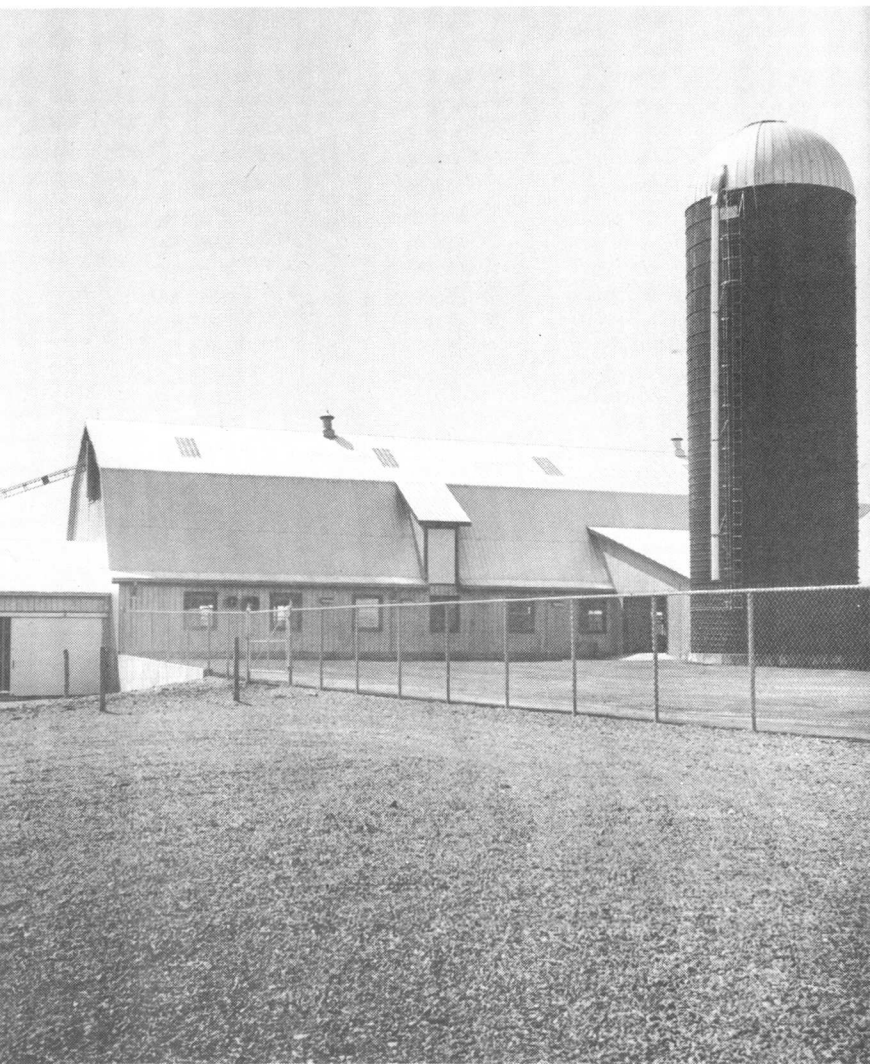
Micro-economics, inventory control, personnel management, and linear programming are examined. Students are required to carry out a quite intensive project designed to give practical management experiences. Business Management games and text cases are used to further students' training in the area of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

2 lecs. and 2 labs. per week.

E 30: Sociology

This course is intended to give the student a better understanding of the community and the people who make up the community. It covers social relations, social organizations and social institutions.

2 lecs. and 2 labs. per week.



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.

A. EXAMPLES OF PRE-EMPLOYMENT COURSES:

1. Dairy Herd Operation	210 hours
2. Swine Herd Operation	140 hours
3. Poultry House Operation	140 hours
4. Woodlot Harvesting	140 hours
5. Artificial Insemination	105 hours
6. Florist Shop Operation	140 hours
7. Park Maintenance	140 hours

B. EXAMPLES OF UP-GRADING COURSES:

1. Greenhouse Crop Production	35 hours
2. Farm Welding	30 hours
3. Swine Herd Operation	70 hours
4. Dairy Husbandry	70 hours
5. Tobacco Production	35 hours
6. Strawberry Production	35 hours
7. Farm Record Analysis	35 hours
8. Pedigreed Seed Production	35 hours
9. Soil Fertility Management	35 hours
10. Silage Corn Production	35 hours
11. Potato Production	35 hours
12. Turnip Production	35 hours

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 \$20.00 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

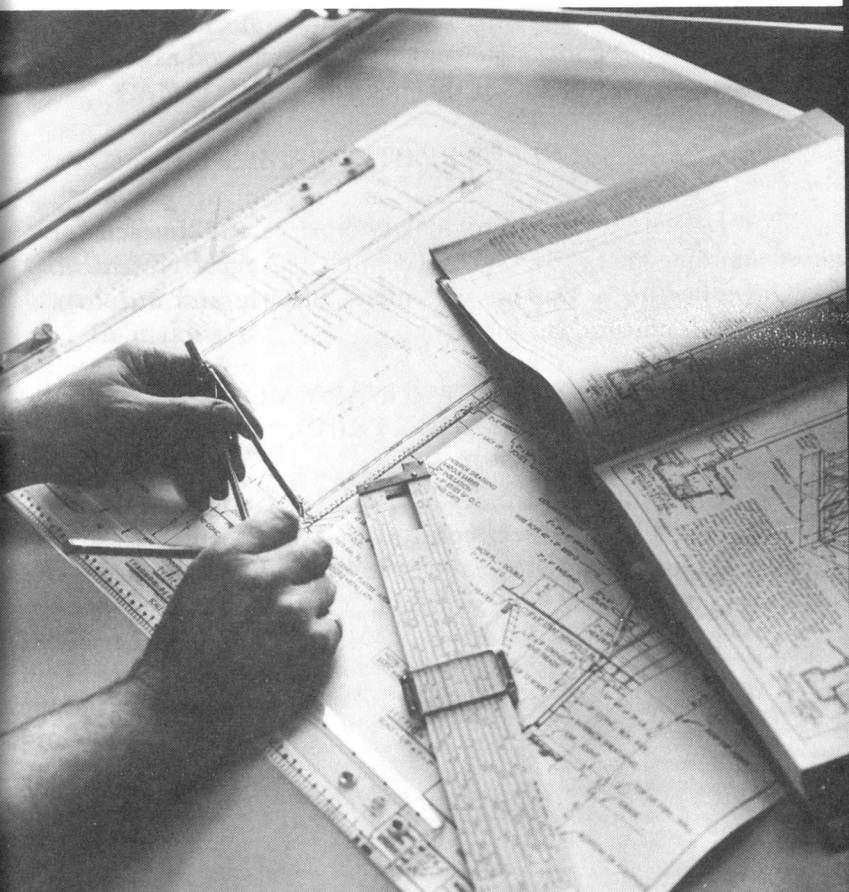
Bathurst—473 King Avenue
Campbellton—37 Roseberry, P.O. Box 610
Chatham—Federal Building, Duke Street
Edmundston—Federal Building, 22 Emerson Street
Fredericton—626 Campbell Street
Keswick—Campbell Street
Minto—Swift Building, P.O. Box 129
Moncton—1081 Main Street
Newcastle—Federal Building, Pleasant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



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 FEEDS LIMITED PRIZES

Master Feeds Limited provides two prizes of \$25. each for highest standing in Second Year Technician Animal Nutrition. One is awarded to a student in Animal Science and one to a Student in Agricultural Business.

NOVA SCOTIA VETERINARY MEDICAL ASSOCIATION PRIZE

The Nova Scotia Veterinary Medical Association provides a prize of \$50.00 to a deserving student who is enrolled in a technician course and who excels in the Animal Pathology course offered to second year students.

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 first year of 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) certificates should be in the Registrar's office not later than September 1.

CANADA PACKERS LIMITED SCHOLARSHIPS

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 September 1.

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 or on the basis 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 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.

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.

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.

Applicants should be sent to Maritime Co-operative Services Limited, Box 750, Moncton, N. B., not later than August 31.

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.

CONTINUATION SCHOLARSHIPS

(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 KENT FOODS CENTENNIAL SCHOLARSHIP

Cerebos (Canada) Limited, a subsidiary of Cerebos Limited, a world wide organization engaged in agriculture and food processing, and the parent company of Kent Foods, desirous of encouraging the study of agriculture, will provide, in recognition of Canada's centennial, a scholarship of \$250. to that student in the second year of the Degree Course who was, in the opinion of the Faculty, the leader in his or her first year. In making this award the Faculty will consider academic standing, leadership in student activities and qualities of good citizenship in the academic community.

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

(For graduates of the Nova Scotia Agricultural College registered at other institutions.)

MACDONALD COLLEGE SCHOLARSHIP

Macdonald College offers a scholarship of \$800. 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:

- (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.

1. Applications must be in the hands of the Principal by April

DIRECTORY
OF STUDENTS



NOVA SCOTIA AGRICULTURAL COLLEGE ENROLLMENT 1968-69

FIRST YEAR DEGREE

Lysle Herbert Anderson, R.R. No. 1, Port Elgin, N.B.
Stephen Kent Archibald, 31 Dunromin Avenue, Truro, N.S.
Walter Joseph Arseneault, R.R. No. 2, Traveller's Rest, P.E.I.
Bruce McGregor Archibald, 15 Salem Street, Sackville, N.B.
Francis Hubert Arseneault, St. Joseph, N.B.
Vincent Hartley Austin, Collingwood, Cumberland Co. N.S.
Donald Gregory Bishop, 9 Churchill St., Truro, N.S.
Brian Randall Bohaker, R.R. No. 2, Granville Ferry, N.S.
Gary Patterson Boyd, R.R. No. 2, Wolfville, N.S.
James Winston Bow, 630 Thessaly Circle, Ottawa, Ont.
John Joseph Brennan, Jr., R.R. No. 1, Bath, Carleton Co., N.B.
Walter James Brown, R.R. No. 1, Windsor, N.S.
Gerard Frederick Brown, Port Elgin, N.B.
David Arthur Browning, R.R. No. 3, Egerton, Pictou Co. N.S.
Heather Maria Hazel Campbell, O'Neil's Road, R.R. No. 1, North Sydney, N.S.
Lindsay Gerald Carter, R.R. No. 4, Berwick, N.S.
Brian Gilbert Clark, R.R. No. 2, Kilburn, N.B.
Valerie Kathleen Clark, North Wiltshire, P.E.I.
Donald G. Cormier, P.O. Box 1223, Yellowknife, N.W.T.
Eric Lester Craig, North Tryon, P.E.I.
George Alexander Craig, R.R. No. 1, Charlo, N.B.
William Evan Craig, 42 Southview Avenue, Kentville, N.S.
Walter Dale Crandall, Petitcodiac, N.B.
Randall Lloyd Creelman, 15 Broad Street, Truro, N.S.
Henry Alan Crozier, R.R. No. 3, Summerside, P.E.I.
John Edward Dalton, 329 Willow Avenue, Summerside, P.E.I.
Robert Starr Dennahower, R.R. No. 3, Truro, N.S.
Gary Robert Peter Desborough, 383 Campbell St., Summerside, P.E.I.
Jeffrey Alan Dickey, Middle Stewiacke, N.S.
Brian Harvey DuPlessis, 611 Graham Avenue, Fredericton, N.B.
Vernon Franklin Eagle, R.R. No. 1, Pleasantville, N.S.
Linda Jane Eisener, 700 Portland St., Dartmouth, N.S.
John Robert Enman, 8 Enman Crescent, R.R. No. 7, Charlottetown, P.E.I.
Charles Hugh Robson Fensom, 5 Weldon St., Sackville, N.B.
Alan Ian Gary Fraser, Box 208, Grand Falls, N.B.
William Alexander Fraser, R.R. No. 1, Somers Rd., Antigonish, N.S.
Janet Nita Fullerton, Shubenacadie, Hants Co., N.S.
Michael Ames Fullerton, Shubenacadie, Hants Co., N.S.
Bram deGeus, 100 College Road, Truro, N.S.
Gregory Hazelton Gillis, 9 Sinclair St., Dartmouth, N.S.
Thea Arina Hilberkink, 1471 Birmingham St., Halifax, N.S.
Thaddeus Joseph Holownia, Renforth Post Office, N.B.
Glenn Donald Hurshman, 6730 Chebucto Road, Halifax, N.S.
Wayne Richard Charles Jackson, 2890 Robert Murphy Drive, Halifax, N.S.
Edward Gary Jensen, R.R. No. 2, Denmark, N.B.
Kerry Stephen Johnson, 8 Dufferin St., Apt. No. 2, Truro, N.S.
William Grant Johnson, R.R. No. 4, New Glasgow, N.S.
John Frederick Landymore, Head of Chezzetcook, N.S.

Paul Francis Matthews, P.O. Box 2068 West, St. John's, Nfld.
 Peter Gordon Maxner, R.R. No. 1, Windsor, N.S.
 James Herman Mayne, Emerald, P.E.I.
 John Meyer, R.R. No. 2, Cornwall, Ont.
 Daryl Russel Mullin, 15 Metcalf St., Moncton, N.B.
 Donald Brian Murphy, Box 196, Kensington, P.E.I.
 John Woodville Bruce McDonald, 162 Riverside Drive, Sydney, N.S.
 Malcolm Keith MacInnes, 33 Pleasant St., Truro, N.S.
 Earl Daniel MacIntosh, R.R. No. 1, Eureka, Pictou Co. N.S.
 John Darrell MacIntosh, 111 MacDonald St., Truro, N.S.
 Donald Allan MacKinnon, 30 Alexander St., Windsor, N.S.
 Margaret Jeanette MacLellan, R.R. No. 4, Lakevale, Antigonish, N.S.
 Alberta Christeen MacLeod, R.R. No. 2, Kensington, P.E.I.
 Michael Charles O'Brien, Petitcodiac, N.B.
 Owen Scott Parker, 20 Patillo Avenue, Truro, N.S.
 Errol Pauptit, Sherbrooke, P.E.I.
 Kenneth George Peacock, Sandy Point Road, St. John, N.B.
 John Allison Pierce, R.R. No. 3, Kingston, N.S.
 Daniel Donald Pollock, Petitcodiac, N.B.
 Donald Kevin Rushton, C.F.B., Greenwood, Kings Co., N.S.
 Darrell Wayne Smith, R.R. No. 3, Oromocto, N.B.
 Dayle Carman Smith, 47 Morrow St., New Glasgow, N.S.
 Robert Snilner, R.R. No. 2, Shawinigan, Quebec
 Leslie Andrew Somerville, 275 Main St., Nashwaaksis, N.B.
 John Lang Stevens, Datta Prasad, N. Gamadia Rd., Bombay 26, India
 Lorna Rose Sweeney, R.R. No. 5, Yarmouth, N.S.
 John Arthur Theakston, 77 Arthur St., Truro, N.S.
 Bernard Theriault, P.O. Box 16, St. Basile, N.B.
 Anthony Joseph Timmons, 47 Heelan St., New Waterford, N.S.
 William Randall Trenholm, Little Shemogue, N.B.
 Jan Van der Leest, Sterstraat 5, Geleen (L), Netherlands
 Keith Arnold Veinot, R.R. No. 2, Bridgewater, N.S.
 Lawrence Irving Watt, Beeches Road, Pictou, N.S.
 Gregory George Webster, Cambridge Station, Kings Co., N.S.
 Weldon James Yeo, 106 Upper Prince St., Charlottetown, P.E.I.

SECOND YEAR DEGREE

Cassandra Joan Adams, Apt. No. 6, 4865 Queen Mary Rd., Montreal, P.Q.
 Charles Malonic Alleyne, Charlotteville, Tobago, West Indies
 James Thomas Archibald, 135½ Willow St., Truro, N.S.
 Ilze Balodis, R.R. No. 2, Hopewell, Pictou Co., N.S.
 Henry Everett Bent, Box 305 Annapolis Royal, N.S.
 Raymond Paul Carmichael, Box 72, Centreville, N.B.
 Charles Edwards Coles, North Milton, P.E.I.
 Neil Benoit Comeau, Meteghan, Digby Co., N.S.
 Carl Frederick DeNuke, R.R. No. 2, Granville Beach, N.S.
 Gregg Henry Dill, 14 Charles Court, Truro, N.S.
 Terrence Kenneth Doncaster, Sussex Corner, Kings Co., N.B.
 Brian Westrup Dykeman, R.R. No. 4, Sussex, Kings Co., N.B.
 Wendell Earl Ebbett, 76 Greenwood Drive, Moncton, N.B.
 Terry Grant Forsythe, R.R. No. 3, Kentville, N.S.
 George Douglas Frame, R.R. No. 2, Shubenacadie, N.S.

Paul Bruce Gillhatt, Granville Center, N.S.
 Frances Elizabeth Goodfellow, R.R. No. 1, Valcartier Village, P.Q.
 Charles Thomas Gorrill, R.R. No. 2, O'Leary, P.E.I.
 Mark Edmund Gourley, 264 Place de Brullon, Boucherville, P.Q.
 Larry Robert Griffiths, 16 Hill St., Amherst, N.S.
 Wayne Rodney Hansen, R.R. No. 3, Pugwash, N.S.
 Hugh Richard Hards, 306 1st East, Cornwall, Ont.
 James Wendell Harris, R.R. No. 2, Summerside, P.E.I.
 Laurence Frank Honey, R.R. No. 1, Annapolis Co., N.S.
 Bryan Charles Hubbard, 187 Edinburgh Drive, Moncton, N.B.
 Roy Rexford Keeler, Ormstown, P.Q.
 David Baxter Kennedy, 1064 Kings Road, Sydney, N.S.
 James Fenwick Lee Knight, Young's Cove Road, Queens Co., N.B.
 Lloyd James Lawson, R.R. No. 5, Woodstock, N.B.
 Albert Chee-Keung Lo, 34 King's Rd, 4th Floor, North Point, Hong Kong
 Barbara Blanche Mann, Chatham Head, N.B.
 Roger James May, 55 Montieith Ave., Westmount, Sydney, N.S.
 Michael Clement Murray, 22 Reade St., Moncton, N.B.
 Michael Herbert McGill, 81 Victoria St., Saint John, N.B.
 Wendell Roderick MacLaine, Rice Point, Clyde River P.O., P.E.I.
 Pooran Phulas Persaud, 65 Bel Air, East Coast Demerara, W.I.
 Louis Harold Phillips, 4 Glendon Drive, Kingston, Jamaica
 William David Pickard, 2793 Conolly St., Halifax, N.S.
 Miles Robert Pierce, R.R. No. 1, Denmark, N.S.
 Jolene Marie Reinhardt, R.R. No. 1, Brooklyn, Queens Co., N.S.
 Karen Marie Rolfe, Bramber, Hants Co., N.S.
 Robert Barry Roop, Brookfield, Colchester Co., N.S.
 George Frederick Searle, R.R. No. 3, Truro, N.S.
 Grant Earle Sheehy, 181 Main St., Middleton, N.S.
 James William Sheppard, 69 Victoria St., Saint John, N.B.
 Mohamed Abdool Samid Sheriff, 177 Lamaha and DeAbreu Sts., East Coast
 Demerara, Newtown Kitty, West Indies
 Robert Floyd Smith, Aylesford, Kings Co., N.S.
 Dale Ronald Smith, Hanson St., Fredericton, N.B.
 Kenneth Howard Smyth, R.R. No. 2, Lennoxville, P.Q.
 Eric Marsten Thompson, West Brook, Cumberland Co., N.S.
 Ronald Gerald Titus, R.R. No. 1, Sussex, N.B.
 Yuk Luen Tsang, 8 Chatham Court, 1st Floor, Kowloon, Hong Kong
 James Ray Weatherhead, Upper Rawdon, Hants Co., N.S.
 Wayne Baxter Welling, R.R. No. 1, Dorchester Crossing, N.B.
 Alexander John Wilson, R.R. No. 4, Bridgetown, N.S.

THIRD YEAR DEGREE

Clayton Robert Atkinson, R.R. No. 7, Amherst, N.S.
 John Norval Blair, Franklin Centre, Quebec
 William Albert Bolhuis, Box 190 Mineville, Halifax Co., N.S.
 David Ray Carruthers, Tatamagouche, N.S.
 John Claude Colwill, Northam, P.E.I.
 Richard Allen Eisner, 90 Smith Avenue, Truro, N.S.
 Linda Jeanette Ellis, Brookfield, N.S.
 David William Gammell, Newton Mills, Colchester Co., N.S.
 Paul Andrew Hendrickson, 34 Sweet Briar Drive, Beaconsfield, P.Q.

Ellison Graham Hendsbee, R.R. No. 4, Mabou, N.S.
Benjamin Hinsley Heywood, 282 Alesworth Avenue, Scarborough, Ont.
Donald Everett Himelman, Grand Lake Station, Halifax, N.S.
Dell Andrew Hiscock, R.R. No. 2, Plaster Rock, N.B.
Andrew Thomas Greer Hutchinson, 14 Creighton Ave., N.B.
Weibe Jurig Meyer, R.R. No. 2, Cornwall, Ont.
Lloyd George Murphy, R.R. No. 2, Seaview, P.E.I.
Kenneth Campbell MacDonald, 96 Lyman St., Truro, N.S.
William Andrew MacKay, R.R. No. 5, Tatamagouche, N.S.
Murray Mervyn Parker, Newport, R.R. No. 3, Hants Co., N.S.
Walter Robert Perrin, R.R. No. 1, Debert, N.S.
Calvin Milledge Rice, R.R. No. 3, Bridgetown, N.S.
Gary Stephen Henry Selig, Wilmot Station, Annapolis Co., N.S.
Calvin Chesley Sparkes, P.O. Box 2068 W, St. John's, Nfld.
Eric Richard Thompson, R.R. No. 3, Moncton, N.B.

FIRST YEAR TECHNICIAN

Allan Lloyd Balderston, Cross Roads, R.R. No. 1, Charlottetown, P.E.I.
Jeptha Frank Ball, Leiches Creek, R.R. No. 1, North Sydney, N.S.
James Barry Banks, Florenceville, Carleton Co., N.B.
William Joseph Bowie, R.R. No. 5, Antigonish, N.S.
Gary Leroy Brown, 153 Church St., Amherst, N.S.
William James Buell, Mount Albion, P.E.I.
Edward Wendell Bull, R.R. No. 4, Woodstock, N.B.
Peter William Burnham, Florenceville, N.B.
Arthur Lawrence Chebassol, Cowan St., Westville, N.S.
John Roderick Chisholm, Post Road, Antigonish, N.S.
Ronald Lee Clark, R.R. No. 1, Elmsdale, Hants Co., N.S.
Marguerite Ferne Clark, R.R. No. 3, Tatamagouche, N.S.
Gregory Ross Coldwell, Port Williams, Kings Co., N.S.
George Daniel Constantine, Havelock, N.B.
Allison Wayne Crawford, Debec, N.B.
Michael Gordon Crimp, 1 Lakeview Point Road, Dartmouth, N.S.
Timothy Kevin Curley, R.R. No. 2, Cardigan, P.E.I.
Philip Vincent Curley, R.R. No. 2, Cardigan, P.E.I.
William Stanley Delaney, Albany, P.E.I.
Lawson Joseph Dougay, Albany, P.E.I.
David Thomas Dowling, 6717 Chisholm Avenue, Halifax, N.S.
Joseph Emmett Doyle, Pleasant Grove, P.E.I.
James David Dunlap, Andover, N.B.
Wayne Arnold Easter, North Wiltshire, P.E.I.
James Wilfred Fougere, West Havre Boucher, Antigonish Co., N.S.
Alan David Freeman, Pleasant River, Queen's Co., N.S.
Milton Herbert Friars, P.O. Box 1126, Sussex, N.B.
Frank Andrew Gammell, Main St., Westville, N.S.
Ralph Ronald Gillis, 38 Waterview Drive, Coxheath, N.S.
Gay Douglas Gordon, Box 248, Oxford, N.S.
Adrianus Henry deGraaf, R.R. No. 2, Port Williams, N.S.
Robert Earl Gray, R.R. No. 34, Centreville, N.B.
Murray John Green, R.R. No. 1, Morell, P.E.I.
Morris John Honey, R.R. No. 1, Wilmot, Annapolis Co., N.S.
Ronald James Harvey, Petitcodiac, N.B.
Eric Wilfred Hope, R.R. No. 1, Ellershoushe, Hants Co., N.S.

Elmer Roy Hutchinson, Ellerslie, P.E.I.
 Douglas Malcolm Jardine, Murray River, P.E.I.
 Darryll Clyde Jonah, R.R. No. 2, Hillsboro, N.B.
 Brian Daniel King, R.R. No. 31, Oxford Junction, N.S.
 Donna May Langille, R.R. No. 3, Tatamagouche, N.S.
 Judy Sharon Langille, R.R. No.4, Tatamagouche, N.S.
 Eric Ralph Langille, R.R. No. 1, Middleton, N.S.
 Gregory Michael LaPlante, Florenceville, N.B.
 Cok Mueng Lee, P.O. Box 1477, Beira, Portuguese East Africa
 Alex D. Leonard, 3569 Percy St., Halifax, N.S.
 Robert Percy Levine, 264 Brunswick St., Truro, N.S.
 Blaine Donald Ling, Winsloe, P.E.I.
 Donald Ian Lockerby, R.R. No. 5, Kensington, P.E.I.
 Lewis Robert Lovely, R.R. No. 2, Florenceville, N.B.
 Donald Roy Lynds, 61 Centre St., Truro, N.S.
 Robert John William Mingo, R.R. No. 2, Denmark, N.S.
 Rae Leigh Mitchell, 105 McSweeney St., Moncton, N.B.
 Foster Belville Monk, East Ship Harbour, Halifax Co., N.S.
 Brent Gregory Morrison, P.O. Box 467, Chatham, N.B.
 Chester Craig Morrison, St. Martin's St., St. John Co., N.B.
 Dale Stuart Murray, Box 391, Sussex, N.B.
 Christopher Philip Michael Musgrave, R.R. No. 3, Newport, Hants Co., N.S.
 David Charles Mutch, R.R. No. 9, Charlottetown, P.E.I.
 Joseph Aeneas MacAulay, Souris Line Road, P.E.I.
 Paul Gerard MacAulay, Souris East, P.E.I.
 John Augustine MacDonald, Jr., Souris Lind Road, P.E.I.
 Lauchlin Alexandre MacDonald, R.R. No. 1, Gabarouse, Cape Breton, N.S.
 Joseph Leo MacDougall, 70 Murphy Road, Westmount, Sydney, N.S.
 Edward Webster MacFadyen, Augustine Cove, P.E.I.
 Murray Dale McIntosh, Glassville, Carleton Co., N.B.
 Ian Polson McKeen, Aspen, Guysborough Co., N.S.
 David Earl MacKenzie, Bradalbane, R.R. No. 3, P.E.I.
 Alan George MacKillop, 18 South Bentinck St., Sydney, N.S.
 Hartt LeRoy MacKinlay, P.O. Box 152, Berwick, N.S.
 George Frank MacLeod, R.R. No. 1, Scotsburn, Pictou Co., N.S.
 Mary Jean McNamara, Silver Falls, Saint John County, N.B.
 Allison Thomas McNally, Tracadie Cross, P.E.I.
 Allastair Ewen MacQuarrie, 262 King's Road, Sydney, N.S.
 Joseph Leslie Nantes, Kelly's Cross, P.E.I.
 Warren Morse Peck, P.O. Box 80, Wolfville, N.S.
 Bruce Edward Rand, Canning, R.R. No. 1, Kings Co., N.S.
 Richard Dennis Reddin, 129 Stratford Road, Charlottetown, P.E.I.
 Ronald Duane Reeves, Summerside, R.R. No. 3, P.E.I.
 William Graham Reid, 130 Victoria St., Truro, N.S.
 Ellery Robichaud, R.R. No. 1, St. Charles, Kent Co., N.B.
 Michael Moore Rogers, Centreville, Kings Co., N.S.
 David Martin Ross, Brookfield, Colchester Co., N.S.
 Ronald T. Sampson, R.R. No. 3, Sydney, N.S.
 Marjorie Anne Scott, R.R. No. 1, New Glasgow, N.S.
 Basil Cephas Simpson, R.R. No. 3, Centreville, N.S.
 James Ronald Somers, R.R. No. 4, Kensington, P.E.I.
 Sylvia June Stevenson, Winsloe, P.E.I.
 Geln Earle Swallow, Albion Cross, St. Peter's Bay, R.R. No. 2, P.E.I.
 Robert Angus Tilsley, R.R. No. 3, Westville, Pictou Co., N.S.

William Barry Vessey, R.R. No. 3, Charlottetown, P.E.I.
Elroy Eric Weeks, Box 144, Lower Sackville, Halifax Co., N.S.
Larry William Wambolt, 25 Parkstone Road, Dartmouth, N.S.
Stanley White, R.R. No. 1, North Sydney, N.S.

SECOND YEAR TECHNICIAN

James Laidlaw Austin, R.R. No. 2, Whycocomagh, N.S.
Gordon Thomas Boutilier, 127 Westmount Road, Sydney, N.S.
Harvey Harold Cairns, New Wiltshire, R.R. No. 2, P.E.I.
Rowan Bruce Caseley, Kensington, R.R. No. 4, P.E.I.
Pierre Gerard Cyr, St. Basile, N.B.
Peter Rembertus Floris, R.R. No. 1, Paradise, Annapolis Co., N.S.
James Edward Fraser, R.R. No. 1, Antigonish, N.S.
James Garth Gillispie, New London, P.E.I.
John Wayne Gillespie, Clyde River, P.E.I.
Charles Ashley Harrison, R.R. No. 2, Fredericton, N.B.
Martin Patrick Howlett, Gould's, St. John South, Nfld.
Randall Robert Hubley, R.R. No. 2, Shubenacadie, N.S.
Larry John Hudson, Port Wade, Annapolis Co., N.S.
Clifford Leigh Jenkins, R.R. No. 1, Charlottetown, P.E.I.
Earl Richard Kidston, R.R. No. 1, Port Williams, N.S.
Charles Robert Killen, R.R. No. 3, Middle Musquodoboit, N.S.
Anna Henry Knol, Oxford, N.S.
Heather Alma Logan, Upper Stewiacke, N.S.
James Reginald Long, Clair, N.B.
Edward Albert Longley, Lawrencetown, Annapolis Co., N.S.
James Ernest Mills, Annandale, P.E.I.
Margaret Alison Mosher, 128 Smith Avenue, Truro, N.S.
Joanne Ruth Murray, 70 Walker St., Truro, N.S.
Eugene Lawrence MacGillivray, R.R. No. 3, Maryvale, N.S.
Harleigh Sutherland MacKay, Albany, P.E.I.
Darrell Arthur McLaughlin, Cliffordvale, N.B.
Gerald Ewart Nickerson, 101 Aberdeem St., Fredericton, N.B.
Phillip Earl Nunn, Summerville, Hants Co., N.S.
Charles Wayne Purdy, Malagash, Cumberland Co., N.S.
Mary Alexandria Quinn, 34 George St., New Waterford, N.S.
Joanne Edith Shewchuck, Marconi Post Office, Tower Rd., N.S.
Judith Anne Smith, Upper Falmouth, Hants Co., N.S.
Paul Emile Soucy, St. Basile, N.B.
Ralph Perry Stone, 82 Woodland Drive, Moncton, N.B.
Brian Joseph Sullivan, Site 24, Box 8, St. John's South, Nfld.
James Frant Tattrie, Farr Avenue, Sharon, Ont.
Bertram Brian Thomson, Albany, R.R. No. 1, North Tryon, P.E.I.
David Arnold Thompson, Dunstaffnage, R.R. No. 3, Charlottetown, P.E.I.
Dale Owen Townsend, R.R. No. 2, Truro, N.S.
Rudie Van Hattem, R.R. No. 2, Cambridge, Kings Co., N.S.
Daniel Wayne Vernon, 3206 Pennington Avenue, Halifax, N.S.
John Alfred Weyman, 589 Roost St., Glace Bay, N.S.
David Almon Wood, R.R. No. 2, York, P.E.I.
Bryan David Woodland, R.R. No. 1, Annapolis Royal, N.S.

THIRD YEAR TECHNICIAN

Ray Franklin Andersen, R.R. No. 1, Andover, N.B.
Vinton Marshall Baltzer, Aylesford, Kings Co., N.S.
Donald John Butler, Avondale, R.R. No. 1, Pictou Co., N.S.
Donald James Cudmore, North Winsloe, P.E.I.
Robert Hugh Farquharson, P.O. Box 75, Kensington, P.E.I.
Gordon Peter Foster, Caroni Limited, Gordon Area, Cowa, W.I.
Richard George Grant, Kinross Post Office, R.R. No. 2, P.E.I.
William Clarence Gammell, Main St., Westville, N.S.
Joseph John Maria Juurlink, R.R. No. 1, Milford Station, N.S.
Randall St. Clair Mailman, R.R. No. 1, Bridgewater, N.S.
James Lee MacAfee, 628 Beaverbrook St., Fredericton, N.B.
James Francis MacNaughton, Box 416, North St., Westville, N.S.
Frederick Ian Smith, Pownal, P.E.I.
Aubrey Eric Trenholm, R.R. No. 7, Amherst, N.S.

