

CONFORMED COPY

LOAN NUMBER 3435 PH

(Engineering and Science Education Project)

between

REPUBLIC OF THE PHILIPPINES

and

INTERNATIONAL BANK FOR RECONSTRUCTION
AND DEVELOPMENT

Dated February 5, 1992

LOAN NUMBER 3435 PH

LOAN AGREEMENT

AGREEMENT, dated February 5, 1992, between REPUBLIC OF THE PHILIPPINES (the Borrower) and INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT (the Bank).

WHEREAS the Borrower, having satisfied itself as to the feasibility and priority of the Project described in Schedule 2 to this Agreement, has requested the Bank to assist in the financing of the Project;

WHEREAS the Bank has agreed, on the basis, inter alia, of the foregoing, to extend the Loan to the Borrower upon the terms and conditions set forth in this Agreement;

NOW THEREFORE the parties hereto hereby agree as follows:

ARTICLE I

General Conditions; Definitions

Section 1.01. The "General Conditions Applicable to Loan and Guarantee Agreements" of the Bank, dated January 1, 1985, with the modifications set forth below (the General Conditions) constitute an

integral part of this Agreement:

(a) The last sentence of Section 3.02 is deleted.

(b) In Section 6.02, sub-paragraph (k) is re-lettered as sub-paragraph (l) and a new sub-paragraph (k) is added to read:

"(k) An extraordinary situation shall have arisen under which any further withdrawals under the Loan would be inconsistent with the provisions of Article III, Section 3 of the Bank's Articles of Agreement."

Section 1.02. Unless the context otherwise requires, the several terms defined in the General Conditions have the respective meanings therein set forth and the term "DOST" means the Borrower's Department of Science and Technology.

ARTICLE II

The Loan

Section 2.01. The Bank agrees to lend to the Borrower, on the terms and conditions set forth or referred to in the Loan Agreement, various currencies that shall have an aggregate value equivalent to the amount of eighty-five million dollars (\$85,000,000), being the sum of withdrawals of the proceeds of the Loan, with each withdrawal valued by the Bank as of the date of such withdrawal.

Section 2.02. The amount of the Loan may be withdrawn from the Loan Account in accordance with the provisions of Schedule 1 to this Agreement for expenditures made (or, if the Bank shall so agree, to be made) in respect of the reasonable cost of goods and services required for the Project described in Schedule 2 to this Agreement and to be financed out of the proceeds of the Loan.

Section 2.03. The Closing Date shall be June 30, 1997 or such later date as the Bank shall establish. The Bank shall promptly notify the Borrower of such later date.

Section 2.04. The Borrower shall pay to the Bank a commitment charge at the rate of three-fourths of one percent ($3/4$ of 1%) per annum on the principal amount of the Loan not withdrawn from time to time.

Section 2.05. (a) The Borrower shall pay interest on the principal amount of the Loan withdrawn and outstanding from time to time, at a rate for each Interest Period equal to the Cost of Qualified Borrowings determined in respect of the preceding Semester, plus one-half of one percent ($1/2$ of 1%). On each of the dates specified in Section 2.06 of this Agreement, the Borrower shall pay interest accrued on the principal amount outstanding during the preceding Interest Period, calculated at the rate applicable during such Interest Period.

(b) As soon as practicable after the end of each Semester, the Bank shall notify the Borrower of the Cost of Qualified Borrowings determined in respect of such Semester.

(c) For the purposes of this Section:

- (i) "Interest Period" means a six-month period ending on the date immediately preceding each date specified in Section 2.06 of this Agreement, beginning with the Interest Period in which this Agreement is signed.
- (ii) "Cost of Qualified Borrowings" means the cost, as reasonably determined by the Bank and expressed as a percentage per annum, of the outstanding borrowings of the Bank drawn down after June 30, 1982, excluding such borrowings or portions thereof as the Bank has allocated to

fund: (A) the Bank's investments; and (B) loans which may be made by the Bank after July 1, 1989 bearing interest rates determined otherwise than as provided in paragraph (a) of this Section.

(iii) "Semester" means the first six months or the second six months of a calendar year.

(d) On such date as the Bank may specify by no less than six months' notice to the Borrower, paragraphs (a), (b) and (c) (iii) of this Section shall be amended to read as follows:

"(a) The Borrower shall pay interest on the principal amount of the Loan withdrawn and outstanding from time to time, at a rate for each Quarter equal to the Cost of Qualified Borrowings determined in respect of the preceding Quarter, plus one-half of one percent (1/2 of 1%). On each of the dates specified in Section 2.06 of this Agreement, the Borrower shall pay interest accrued on the principal amount outstanding during the preceding Interest Period, calculated at the rates applicable during such Interest Period."

"(b) As soon as practicable after the end of each Quarter, the Bank shall notify the Borrower of the Cost of Qualified Borrowings determined in respect of such Quarter."

"(c) (iii) 'Quarter' means a three-month period commencing on January 1, April 1, July 1 or October 1 in a calendar year."

Section 2.06. Interest and other charges shall be payable semiannually on April 15 and October 15 in each year.

Section 2.07. The Borrower shall repay the principal amount of the Loan in accordance with the amortization schedule set forth in Schedule 3 to this Agreement.

ARTICLE III

Execution of the Project

Section 3.01. (a) The Borrower declares its commitment to the objectives of the Project as set forth in Schedule 2 to this Agreement, and, to this end, shall carry out the Project through DOST with due diligence and efficiency and in conformity with appropriate financial, administrative and educational practices, and shall provide, promptly as needed, the funds, facilities, services and other resources required for the Project.

(b) Without limitation upon the provisions of paragraph (a) of this Section and except as the Borrower and the Bank shall otherwise agree, the Borrower shall carry out the Project in accordance with the Implementation Program set forth in Schedule 5 to this Agreement.

ARTICLE IV

Financial Covenants

Section 4.01. (a) The Borrower shall maintain or cause to be maintained records and accounts adequate to reflect in accordance with sound accounting practices the operations, resources and expenditures in respect of the Project of the departments or agencies of the Borrower responsible for carrying out the Project or any part thereof.

(b) The Borrower shall:

(i) have the records and accounts referred to in paragraph (a) of this Section for each fiscal

year audited, in accordance with appropriate auditing principles consistently applied, by independent auditors acceptable to the Bank;

- (ii) furnish to the Bank as soon as available, but in any case not later than nine months after the end of each such year, the report of such audit by said auditors, of such scope and in such detail as the Bank shall have reasonably requested; and
- (iii) furnish to the Bank such other information concerning said records and accounts and the audit thereof as the Bank shall from time to time reasonably request.

(c) For all expenditures with respect to which withdrawals from the Loan Account were made on the basis of statements of expenditure, the Borrower shall:

- (i) maintain or cause to be maintained, in accordance with paragraph (a) of this Section, records and accounts reflecting such expenditures;
- (ii) retain, until at least one year after the Bank has received the audit report for the fiscal year in which the last withdrawal from the Loan Account was made, all records (contracts, orders, invoices, bills, receipts and other documents) evidencing such expenditures;
- (iii) enable the Bank's representatives to examine such records; and
- (iv) ensure that such records and accounts are included in the annual audit referred to in paragraph (b) of this Section and that the report of such audit contains a separate opinion by said auditors as to whether the statements of expenditure submitted during such fiscal year, together with the procedures and internal controls involved in their preparation, can be relied upon to support the related withdrawals.

ARTICLE V

Effective Date; Termination

Section 5.01. The following are specified as additional conditions to the effectiveness of this Agreement within the meaning of Section 12.01 (c) of the General Conditions:

- (a) that the Borrower appoint all members of the Project Advisory Group;
- (b) that the Borrower appoint all full time staff of the Project Implementation and Coordinating Office; and
- (c) that the Borrower issue an order permitting private universities, participating in the Project, to charge a special laboratory development fee and a special laboratory tuition fee.

Section 5.02. The date ninety (90) days after the date of this Agreement is hereby specified for the purposes of Section 12.04 of the General Conditions.

ARTICLE VI

Representative of the Borrower; Addresses

Section 6.01. The Secretary of Finance of the Borrower is

designated as representative of the Borrower for the purposes of Section 11.03 of the General Conditions.

Section 6.02. The following addresses are specified for the purposes of Section 11.01 of the General Conditions:

For the Borrower:

Secretary of Finance
Department of Finance
Manila
Republic of the Philippines

Cable address:

SECFIN
Manila

Telex:

40268 CB-CONF
7550 CBP-PH

For the Bank:

International Bank for
Reconstruction and Development
1818 H Street, N.W.
Washington, D.C. 20433
United States of America

Cable address:

INTBAFRAD
Washington, D.C.

Telex:

248423 (RCA)
82987 (FTCC)
64145 (WUI) or
197688 (TRT)

IN WITNESS WHEREOF, the parties hereto, acting through their duly authorized representatives, have caused this Agreement to be signed in their respective names in the District of Columbia, United States of America, as of the day and year first above written.

REPUBLIC OF THE PHILIPPINES

By /s/

Emmanuel Pelaez

Authorized Representative

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

By /s/

Gautam S. Kaji

Regional Vice President
East Asia and Pacific

SCHEDULE 1

Withdrawal of the Proceeds of the Loan

1. The table below sets forth the Categories of items to be financed out of the proceeds of the Loan, the allocation of the amounts of the Loan to each Category and the percentage of expenditures for items so to be financed in each Category:

Category	Amount of the Loan Allocated (Expressed in Dollar Equivalent)	% of Expenditures to be Financed
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(1) Equipment	36,300,000	100% of foreign expenditures, 100% of local expenditures (ex-factory cost) and 75% of local expenditures for other items procured locally
(2) Books, journals and instructional materials	10,500,000	100% of foreign expenditures, 100% of local expenditures (ex-factory cost) and 75% of local expenditures for other items procured locally
(3) Civil works	8,500,000	90%
(4) Training	21,800,000	100%
(5) Consulting Services including visiting professors	2,300,000	100%
(6) Management and supervision	800,000	100%
(7) Unallocated	4,800,000	
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TOTAL	85,000,000	=====

2. For the purposes of this Schedule:

(a) the term "foreign expenditures" means expenditures in the currency of any country other than that of the Borrower for goods or services supplied from the territory of any country other than that of the Borrower; and

(b) the term "local expenditures" means expenditures in the currency of the Borrower or for goods or services supplied from the territory of the Borrower.

3. Notwithstanding the provisions of paragraph 1 above, no withdrawals shall be made in respect of payments made for expenditures prior to the date of this Agreement.

SCHEDULE 2

Description of the Project

The objective of the Project is to support technology development for industrialization in the Philippines by increasing the supply of better trained scientific and technical (S&T) manpower in priority fields.

The Project consists of the following parts, subject to such modifications thereof as the Borrower and the Bank may agree upon from time to time to achieve such objectives:

Part A: Policy Action Plan

For: (i) the preparation and application of criteria or directives to improve the institutional framework for funding and monitoring engineering and science education, including a study of accreditation arrangements; and (ii) the establishment and attainment of targets or actions to improve the enrollment structure as well as financial and resource management of selected project

institutions, including a study of long-term arrangements for improved laboratory operation and maintenance.

Part B: Engineering Education and Research

(i) Strengthening of faculty, laboratories and programs including university-industry linkages to improve undergraduate and graduate programs in priority fields at five public and 14 private colleges of engineering; (ii) to develop research capacities in leading universities; and (iii) upgrading of engineers in industry and research and development as well as of new engineering graduates in priority fields.

Part C: Science Education and Research

(i) Strengthening of faculty, laboratories and programs to improve undergraduate and graduate education in priority fields, including environmental education, at four public and six private colleges of science, and to develop research capacities in two leading universities; and (ii) upgrading of scientists in industry and research and development as well as of new science graduates in priority fields.

Part D: Management of Technology

Development of programs and faculty to introduce new master's programs as well as short courses in management of technology for personnel in the government and industry at the schools of engineering, science and business administration at three universities.

Part E: Library Networks

(i) Strengthening of library staff, collections and facilities at libraries at three engineering and seven science colleges; and (ii) development of a system of networking among those libraries.

Part F: Secondary School Science and Math/In-service Teacher Training

Improvement of teachers, libraries and laboratories to strengthen science and math instruction at 110 secondary schools and 22 teacher training institutions responsible for in-service teacher training.

Part G: S&T Manpower Planning and Monitoring

Strengthening of staff, programs and equipment to (i) improve the monitoring roles of the Technical Panel for Engineering Education and the Technical Panel for Science; (ii) develop a management information system at DOST to help plan and coordinate national S&T manpower programs; and (iii) improve DOST capacity to coordinate and implement the proposed project.

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The Project is expected to be completed by December 31, 1996.

SCHEDULE 3

Amortization Schedule

Date Payment Due	Payment of Principal (expressed in dollars)*
October 15, 1997	1,550,000
April 15, 1998	1,610,000
October 15, 1998	1,670,000
April 15, 1999	1,735,000
October 15, 1999	1,805,000
April 15, 2000	1,875,000
October 15, 2000	1,945,000

April 15, 2001	2,020,000
October 15, 2001	2,100,000
April 15, 2002	2,180,000
October 15, 2002	2,265,000
April 15, 2003	2,350,000
October 15, 2003	2,445,000
April 15, 2004	2,540,000
October 15, 2004	2,635,000
April 15, 2005	2,740,000
October 15, 2005	2,845,000
April 15, 2006	2,955,000
October 15, 2006	3,070,000
April 15, 2007	3,185,000
October 15, 2007	3,310,000
April 15, 2008	3,435,000
October 15, 2008	3,570,000
April 15, 2009	3,710,000
October 15, 2009	3,850,000
April 15, 2010	4,000,000
October 15, 2010	4,155,000
April 15, 2011	4,315,000
October 15, 2011	4,480,000
April 15, 2012	4,655,000

* The figures in this column represent dollar equivalents determined as of the respective dates of withdrawal. See General Conditions, Sections 3.04 and 4.03.

Premiums on Prepayment

Pursuant to Section 3.04 (b) of the General Conditions, the premium payable on the principal amount of any maturity of the Loan to be prepaid shall be the percentage specified for the applicable time of prepayment below:

Time of Prepayment	Premium
	The interest rate (expressed as a percentage per annum) applicable to the Loan on the day of prepayment multiplied by:
Not more than three years before maturity	0.15
More than three years but not more than six years before maturity	0.30
More than six years but not more than 11 years before maturity	0.55
More than 11 years but not more than 16 years before maturity	0.80
More than 16 years but not more than 18 years before maturity	0.90
More than 18 years before maturity	1.00

SCHEDULE 4

Procurement and Consultants' Services

Section I: Procurement of Goods and Works

Part A: International Competitive Bidding

1. Except as provided in Part C hereof, goods shall be procured under contracts awarded in accordance with procedures consistent with those set forth in Sections I and II of the "Guidelines for Procurement under IBRD Loans and IDA Credits" published by the Bank in May 1985 (the Guidelines).

2. To the extent practicable, contracts for equipment shall be grouped into bid packages estimated to cost the equivalent of \$200,000 or more.

Part B: Preference for Domestic Manufacturers

In the procurement of goods in accordance with the procedures described in Part A.1 hereof, goods manufactured in the Philippines may be granted a margin of preference in accordance with, and subject to, the provisions of paragraphs 2.55 and 2.56 of the Guidelines and paragraphs 1 through 4 of Appendix 2 thereto.

Part C: Other Procurement Procedures

1. Items or groups of items for equipment estimated to cost the equivalent of \$200,000 or less per contract, up to an aggregate amount equivalent to \$7,000,000, and all civil works, may be procured under contracts awarded on the basis of competitive bidding, advertised locally, in accordance with procedures satisfactory to the Bank.

2. Specialized equipment estimated to cost up to an aggregate amount equivalent to \$6,800,000 may be procured under contracts awarded through limited international bidding procedures on the basis of evaluation and comparison of bids invited from a list of at least three qualified suppliers eligible under the Guidelines and in accordance with the procedures set forth in Sections I and II of the Guidelines (excluding paragraphs 2.8, 2.9, 2.55 and 2.56 thereof).

3. Items or groups of items for equipment estimated to cost the equivalent of \$50,000 or less per contract, up to an aggregate amount equivalent to \$2,300,000, may be procured under contracts awarded on the basis of comparison of price quotations obtained from at least three suppliers eligible under the Guidelines, in accordance with procedures acceptable to the Bank.

4. Books, journals and instructional materials may be procured under contracts awarded on the basis of direct negotiations with suppliers, in accordance with procedures acceptable to the Bank.

Part D: Review by the Bank of Procurement Decisions

1. Review of invitations to bid and of proposed awards and final contracts:

(a) With respect to each contract estimated to cost the equivalent of \$200,000 or more, the procedures set forth in paragraphs 2 and 4 of Appendix 1 to the Guidelines shall apply.

(b) With respect to each contract not governed by the preceding paragraph, the procedures set forth in paragraphs 3 and 4 of Appendix 1 to the Guidelines shall apply.

(c) The provisions of the preceding subparagraph (b) shall not apply to contracts on account of which withdrawals are to be made on the basis of statements of expenditure.

2. The figure of 15% is hereby specified for purposes of paragraph 4 of Appendix 1 to the Guidelines.

Section II. Employment of Consultants

In order to assist the Borrower in carrying out the Project, the Borrower shall employ consultants whose qualifications, experience and terms and conditions of employment shall be satisfactory to the Bank. Such consultants shall be selected in accordance with principles and procedures satisfactory to the Bank on the basis of the "Guidelines for the Use of Consultants by World Bank Borrowers and by the World Bank as Executing Agency" published by the Bank in August 1981.

SCHEDULE 5

Implementation Program

The Borrower shall:

1. By December 31, 1992, ensure that state universities, participating in the Project, will obtain from their respective Boards of Regents approval to charge a special laboratory development fee and a special laboratory tuition fee acceptable to the Bank.
 2. By December 31, 1992, cause each university, participating in the Project, to establish a satisfactory science and engineering laboratory fund.
 3. By May 31, 1993, cause all universities, participating in the Project, to meet minimum laboratory equipment standards, set by the Technical Panels for Engineering and Science Education.
 4. By August 31, 1992, install a system to monitor scholarship programs at DOST.
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