

MAJOR PROGRAMS ON RESEARCH AND DEVELOPMENT

1. P I N Y A PROGRAM

Pineapple Industry prospects through **New sYstems** of Production **And** Post - harvest Handling and Processing

2. RDPFS PROGRAM

Research and **D**evelopment **P**rogram along **F**ood **S**ecurity

3. WRITE PROGRAM

Writing **R**esources as **I**nnovative **T**ools in **E**ducation

4. GMPTP PROGRAM

Generating **M**odels and **P**rototypes for **T**echnopreneurship **P**rogram

5. P O W E R PROGRAM

Promoting **O**pportunities **W**ith alternative **E**nergy **R**esources

6. TRACER PROGRAM

Tracking **R**ecords of **A**lumni **C**ompetencies and **E**mployment status for **R**elevance and excellence

7. RSA PROGRAM

Research **S**ervice **A**ssistance Program

I. P I N Y A PROGRAM

Pineapple Industry prospects through **New sY**stems of Production **A**nd Post - harvest Handling and Processing

Queen Pineapple is a tropical fruit known for its sweet aroma and crispy-juicy characteristic grown in Camarines Norte. This is the flagship program of Camarines Norte State College.

- a) Policies and Standards for Queen Pineapple Industry
- b) Queen Pineapple Product Development
- c) Packaging techniques for marketability
- d) Storage system and shelf life enhancements
- e) QP wastes utilization
 - ✓ Potential of QP along pharmaceuticals and medicinal benefits
 - ✓ Potential of QP as cosmetics and personal care products
 - ✓ Potential of QP as household products (marinade, vinegar, wine, meat tenderizer, etc.)
 - ✓ Potential of QP as alternative resource for agriculture or fishery industry

II. Research And Development Program Along Food Security (RDPFS)

Basic and applied researches to support for enhanced access to a sufficient supply of safe and nutritious food, improved food production, alternative food sources for health well- being and long-term economic prosperity among marginalized members of the community.

Components of the programs are as follow:

- a) Proper , sanitary Food handling , processing, packaging
- b) Alternative sources of human food
- c) System of prolonging shelf-life of food products
- d) Increasing value of crops and alternative food resources
- e) Exploring potentials of agricultural and fishery crops and other food products

III. WRITE Program

Writing **R**esources as **I**nnovative **T**ools in **E**ducation

This WRITE PROGRAM is aligned with the CNSC research priority thrust which is Education and Capability building. This program will provide opportunity for faculty members to upscale their academic ranks through writing books that may serve as textbook, module or laboratory manual in their classes. It has three components namely a) Writeshop Project; b) Learning Resource Validation Project and c) Publication and Commercialization Project

The **Writeshop Project** has the following objectives:

1. Empower the faculty with skills and confidence in creating learning resource materials in the form of a textbook, module or laboratory manual;
2. Promote competence of professors/instructors
3. Enhance and develop curricula through relevant, responsive and updated textbooks, modules or laboratory manuals;

The **Learning Resource Validation Project** has the following objectives;

1. Engage the faculty in research along Development and Validation of Instructional Materials.
2. Validate the effectiveness of the instructional material in enhancing performance of students.

The **Research Projects** that may be conducted by faculty and students of CNSC are along the following concepts: a) Development of Instructional Materials and b) Validation of Instructional Materials

The **Publication Project** has the following objectives:

1. Facilitate the processing and securing of ISBN or patent.
2. Print the learning resources developed and validated for effectiveness.
3. Promote and commercialize the learning resources authored by the CNSC faculty.

IV. Generating Models and Prototypes For Technopreneurship Program (GMPTP)

The components of this program include developmental researches that merge intensively the technology and entrepreneurial opportunities to enhance lives of the community.

- a) Fabrication of farm implements or accessories
- b) Community models for small scale off-grid solar energy
- c) Expanding agro-based production
- d) Improvement of fisheries market technologies
- e) Study on market for agro-based products and services
- f) Development of decision support system for business or entrepreneurial activities

V. P O W E R PROGRAM

Promoting Opportunities With alternative Energy Resources

The program comprises of researches that would harness or utilize the available indigenous or natural resources as a renewable energy. The primary objective of this program is to explore possibilities if resolving critical issues on energy supply and mitigate the adverse effects of its depletion.

- a) Exploring potential of indigenous or wild plants as source of alternative fuel
- b) Production of feedstock from wastes
- c) Studies on bioremediation and biofuels
- d) New scheme to capture solar energy
- e) Fabrication of device to improve efficiency of natural or commercial power sources

VI. TRACER PROGRAM

Tracking **R**ecords of **A**lumni **C**ompetencies and **E**mployment status for **R**elevance and excellence

The TRACER Program responds to the CHEDs rationalization reforms. All HEIs need to study the impact of their program offerings as their graduates emerge in the work force of the country. The employability of the graduates and their performance in the industry are significant indicators of effectiveness. The components of the TRACER:

1. Employability of graduates by delivery units
2. Assessment of industry requirements and competencies of CNSC graduates
3. Development of information system to fast track gathering of alumni information and feedback
4. Designing On-the –Job training /practice teaching evaluation method or tool
5. Strengthening alumni communication channels and ties with CNSC
6. Experimental studies on classroom strategies to enhance students' performance
7. Curriculum design for customized learning
8. Classroom management and discipline techniques
9. Performance of students in board and licensure examinations
10. Tracer studies on employability, work retention or promotion
11. Impact of the Dualized Education Program
12. Evaluation or assessment of learning for distance education
13. Comparative studies of Policies, Standards or Quality Indicators
14. Evaluation of Curriculum
15. Alternative modes of delivering instruction

VII. Research Service Assistance Program (RSA)

The CNSC Research Services Division (RSD) with its pool of Faculty Research Experts provides the following services/assistance:

I. IP Protection Assistance

Security and intellectual property protection of the original and creative works of faculty and student researchers are given the utmost importance and priority

- a. Copyright Registration
- b. Application for patent
- c. Application for Industrial Design
- d. Application for Utility Model

II. Publication Assistance

Recognizing the importance of sharing mature technologies, new knowledge/discoveries and expertise which are generated and enhanced through research study/project/program of faculty and students, services on the following are provided by RSD.

- a. Packaging and repackaging of Proposal/Publishable Research Articles
- b. Originality Check
- c. External/Internal Refereeing

III. Proposal Packaging

With the current emergence of the different drivers of change, the RSD ensures that proposals are in line with the Research Agenda of the College and responsive to the national research thrusts. Proposals are ensured to be packaged in accordance with required format of the Grants-in-Aid giving body through

- a. Eligibility Check
- b. Technical Evaluation
- c. Consultancy Services-Pool of Experts

IV. Capability Building

Taking cognizance of the importance of human resource, the following services are provided to ensure that faculty and student researchers' capability is continuously developed and is consistently at par with that of international standards

- a. Writeshop for Faculty Researchers
- b. Paper Presentation Travel/Assistance
- c. Attendance/Participation in Seminars/Workshops/Training
- d. R&D In-house Review