



**A PERSONAL ACCOUNT OF THE  
DACUM PROCESS**

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**PARTNERSHIP FOR ENVIRONMENTAL  
TECHNOLOGY EDUCATION  
SERVICES OFFERED TO TRIBAL COLLEGES**

**1. Program Planning and/or Improvement Through Technical Assistance**

- a. Conduct Program Assistance: to better tailor an existing a program with job opportunities within the community
- b. Conduct a job market/labor market assessment
- c. Update current curriculum
- d. Local advisory committee to help create a dacum in the science and/or technology field

## JOB ASSESSMENT

First questions:

Where are the jobs? (regionally speaking)

Region – Montana, North Dakota, and South Dakota

Mostly rural area – Unemployment is 70%

Farming/ranching

Fort Peck Reservation: teaching and nurses (IHS)

Purpose of this question is to meet the community needs

This assessment has to be done before a dacum panel is put together!!!!

# FORT PECK COMMUNITY COLLEGE

Tribal community college founded in 1979

Student body: 75% Native American enrollment and majority first generation college student

350-400 students per semester



## SCIENCE PROGRAMS

<b>Environmental Science</b>	<b>Associate Degree of Science</b>
Pre-health /Pre-nursing	Associate Degree of Science
Biomedical Science	Associate Degree of Science
Environmental Compliance and Technology Technician	Associate Degree of Science
Hazmat	Certificate

## OLD CURRICULUM VS. NEW CURRICULUM

Old Program	New Program
Applied associate of science in hazmat	
Associate of science of hazmat	Associate degree environmental technician – transferable now
1yr certificate hazmat	COT /vocational-tech hazmat certificate

## FIELD OPERATIONS

1. Perform Sampling and Monitoring
2. Develop and Interpret Standard Operating Procedures
3. Perform Site Investigation
4. Understand Research Methodologies
5. Perform Spill Containment
6. Monitor Shelf Life of Hazardous Chemicals
7. Ensure Proper Labeling/Cataloging of Hazardous Materials
8. Ensure Proper Storage Inventory Protocols are being followed for hazardous Materials

## DACUM

### WHAT IS A DACUM:

Stand for Developing a CirculUM

**PURPOSE:** to improve or create a curriculum to meet the educational or employment needs of college's degree programs, vo-tech programs, and companies

Basically to meet workforce needs and college accreditation.

Described as “organized brainstorming”

Goal at Fort Peck Community College: to revamp the hazmat program

## DACUM CREATING PROCESS

Three Parts to the dacum processes

1. Panel of experts in the field
2. Describe job skills and competence needed for the profession
3. Tools and additional knowledge needed for the job

## CREATING A DUCUM STEP ONE:

Inviting experts in the community who might possible higher associate degree environmental technician

Experts in the area
1. Fort Peck Tribes
2. Office of Environmental Protection
3. FPCC agricultural Department
4. Great Northern Development – environmental cleanup
5. Fire Department/vo-tech department
6. Oil companies and small business
7. Environmental Health Department

**CREATING A DACUM PART TWO:  
DESCRIBING THE COMPETENT JOB  
SKILLS THAT ARE NEEDED**

- Dacums Provided a place were these business could all meet together and talk about what they except from potential employees
- 1.Prepare students for the work force whether getting a certificate or a four year degree
  2. What skills do the students need to prepare the for the job
    - a. On the job training
    - b. Job preparatory class
  - 3.Work force communication
    - a. Writting skills
    - b. Communication skills
    - c. Math skills
  4. Future internships/grant collaboration with local businesses in the area

**CREATING A DACUM PART THREE:  
SKILLS AND TOOLS REQUIRED FOR  
WORKERS /STUDENTS**

- Physical task that need to be performed and how to perform them correctly
  - Site Assessments/Habitat Assessment
    - Standard operating Procedures
      - Field Work
    - First Aid and CPR course
      - Safety plans

## GENERAL AREAS OF COMPETENCE

1. Field

2. Safety

3. Technology and equipment

4. Public Relations and Outreach

5. Internal Training and Education

6. Record Keeping

7. Professional Development

# SAFETY

## 1. Understanding hazardous Assessment Resources

2. Identify Protocol's and Its Hazards

3. How to Conduct Site/Risk Assessment

4. Understanding all levels and uses of Proper Protective Equipment

5. Maintain and Inspect Safety Equipment before going on the job

6. Certified in First Aid and CPR

7. Proficiency in Monitoring Sampling Equipment and Maintaining it

## REGULATORY COMPLIANCE

1. Follow Regulations for the Job
2. General Knowledge of which regulatory agency applies to specific agency
3. Review Updates for Applicable Regulations
4. Understand how to implement National Incident Management System protocol
5. Understand Community Right to Now Act and follow it

## TECHNOLOGY AND EQUIPMENT

1. How and when to calibrate equipment

2. Ability how to operate specific equipment for task

3. Assist in Selection of Equipment

4. Stay abreast with evolving and current equipment, technology, and methodology

5. Provide hands on training with equipment

6. Ensure proper storage of equipment

7. Familiar with using social media when appropriate

8. Familiar with how to use GIS/GPS

## PUBLIC RELATIONS AND OUTREACH

1. Risk Management – ability to communicate with public
2. Recognize cultural differences
3. Understand Chain in Command
4. Establish and Effectively Utilize Partnerships
5. Risk Communication - Assist with Workshop for public information

## RECORD KEEPING

1. Provide written reports as required (ex. Safety plan)
2. Maintain appropriate disposal documents (i.e. disposal manifest)
3. Material Safety Data Sheets – up to date
4. Who takes CEU classes and when they need to be recertified

## PROFESSIONAL DEVELOPMENT

1. Acquire/maintain proper equipment
2. Keep up with current or emerging research methodologies
3. Network with other professionals in the field

## ADDITIONAL SKILLS AND KNOWLEDGE

### Additional Skills and Knowledge

1. Understanding grant management and budgets
2. Computer Skills
3. General Chemistry
4. Additional certifications in safety that are not included in the hazwhopper course
5. Know important regulations and their amended versions – environmental law
6. Recommended Classroom/Field Activities
7. Soft Skills – team work

## THE DACUM OUTCOME

### Job Description:

The Environmental Compliance and Technology Technician interprets and applies applicable regulations, identifies, understands and maintains regulatory compliance and monitors and reports health and physical hazards in the workplace and the environment with the utilization of applicable technology.

## COMMENTS/OUTCOMES FROM THE WORKSHOP

- Most common phrase: environmental clean up companies in the area would rather higher community members trained in for example asbestos, hazmat, meth abatement , lead paint then spending a bunch of money to higher people elsewhere
- In addition, it would keep money with in the community not elsewhere
  - More CEU classes offered at the college communities needs
    - Provide yearly refresher training for CEU classes
    - Meth abatement, asbestos, lead paint removal
      - Grant Collaboration with FPCC
- Internships offered at these local businesses – would provide already trained employees.

## SPECIFIC TASKS

1. Perform Sampling and Monitoring

2. Perform Site Investigation

3. Perform Environmental Remediation

4. Perform Spill Contamination

5. Monitor Shelf Life of Hazardous Chemicals

6. Ensure Proper Labeling/cataloging of hazardous materials

7. Ensure Proper Storage and Inventory Protocols for Hazardous Materials

## WHY USEFUL

- Program was not transferable before, but now it is
  - Program needed to be revamped/updated
  - Learned how to create and why documents were important
- Important because Fort Peck tribes now has their own oil company
- Aided in fostering relationship between industry and to collaborate on grants to provide internships for students
  - Future employment
- Companies/industry now aware of each other and what is going on at the college

## SURVEY OF THE WORKSHOP

Evaluation item	Strongly agree	Agree	Strongly Disagree	No Opinion
Seminar location and facilities were adequate	 1	2	3	4
Trainer(s) knowledge about the subject area	 1	2	3	4
Materials provided useful and current	 1	2	3	4
I feel I will be able to utilize the knowledge gained	 1	2	3	4
I would recommend this seminar to others	 1	2	3	4
Overall I would rate this seminar as useful	 1	2	3	4

**ACTIVITY EVALUATION FORM  
CONTINUED**

*The items I found useful for my particular professional field were:*

Great course that will hopefully benefit the college

Learned about dacum format

*The items that I found boring or relevant:*

Nothing really

## CONTINUEING EDUCATIONAL CREDITS CEU CLASSES

- 40 hr hazwhopper class
  - 8 hr refresher course
- Oil field workers hazmat class
- Hazardous materials for custodians at Head Start and Fort Peck Community College
  - Hazmat for building 101
- Hazmat classes for cleaning chemicals for janitorial purposes
  - Ex. Head Start

## WHO TAKES THESE CEU CLASSES

Communities in Northeastern Montana on and off the reservation

Fire departments for five counties

Police department for five counties

Office of Environmental Protection

Tribal Environmental Health Department

## TRAIN THE TRAINER

1. Introduction on how different teaching methods geared towards adults
2. Emergency Response and Rescue Drills
3. Incident Command Systems
4. Confined Space Activities
5. Hazard Risk Assessment



## COLLEGE OF TECHNOLOGY

- Collaborating with other tribes to provide three month certificates  
And then to get a job automatically after completing the certificate that should  
be starting next fall
- Environmental Compliance and Technology Technician Classes will be  
taught for all COT degrees for CEU purposes
  - Truck Driving
  - Welding
  - Construction

## SO WHAT IS HAPPENING WITH THE ENVIRONMENT TECHNICIAN PROGRAM

- CEU classes are being taught
  - Formatted old hazmat class from the 80hr to 40hr
- Trainer The Trainer Institute provided us with additional update curriculum material
  - New students in the program
    - Two Students which plan to get a four year degree in OSHA
  - Transfer to Montana Tech of the University of Montana for OSHA degrees
- When they come back they would have a job in place were they have family and their own tribe with the industry development here
- Future possible jobs are in an existing closed down oil refinery and oil field

## FUTURE JOB MARKET

- Water Quality – Brine water Pollution
- Great Northern Development/OEP - cleaning up brownfield sites
- Fort Peck Oil Company – Safety Classes and enforcing Safety laws
  - Fort Peck Tech
- Maintaining Safety in Oil Refinery (4yr OSHA degree/master's degree in Industrial Hygiene)
  - Fort Peck Tribes Hazmat Team

## ACKNOWLEDGEMENT

- Partnerships for Environmental Technology
  - Train The Trainer Institute
- All of the local business of the Fort Peck Reservation

**ANY QUESTIONS ?!**

