# Table of Contents

Acknowledgements 4

Glossary of Terms 5

## Essential Tool 6

**Purpose:** The Essential Toolkit for Communities of Practice 6

Who Should Use this Essential Tool 6

How to Use This Essential Tool 6

## Communities of Practice 7

What are Communities of Practice? 7

The Goals of Communities of Practice 7

What do Communities of Practice Look Like? 7

Typical Activities for Communities of Practice 8

What do Communities of Practice Do? 9

Where to Start 9

Communities of Practice (COP) Outcomes Timeline-at-a-Glance 10

What I Can Expect to Do as a Member of a COP? 10

## Tools for Communities of Practice 11

Introduction: The Nine Principles of Teaming 11

Principle 1: A team reflects and demonstrates a shared/collective vision 11

Principle 2: A team promotes empowerment of all members 11

Principle 3: A team demonstrates shared decision making 12

Principle 4: A team demonstrates synergy- the whole is more than the sum of its parts 12

Principle 5: A team highly regards diversity as a necessary part of creativity and collaboration 12

Principle 6: A team fosters the full inclusion and participation of people impacted by its actions 12

Principle 7: A team facilitates the self-determination and personal growth of itself and its individual members 13

Principle 8: A team is responsive to its authentic (ecological) context 13

Principle 9: A team reflects and demonstrates a dynamic and fluid quality 13

Tool 1: The Nine Principles Reflections Worksheet 14

    How to Build an Effective Community of Practice 16

    Enticing the Right People 16

Tool 2: Potential Member Checklist 17

    How to Decide Initial Roles, Responsibilities, and the COP Vision 18

Tool 3: Team Member Checklist 19

Tool 4: Team Member Roles and Responsibilities Worksheet 20

    How to Conduct COP Meetings 21
Tool 5: How to Identify Ground Rules and Operational Procedures    22
Tool 6: Sample Meeting Agenda    23
  COP Meeting Log    24
  Resource Mapping    25
  What is Resource Mapping?    25
Tool 7: Resource Mapping Worksheet    27
  Knowing if your COP is On-Track and Meeting its Goals    30
  Evaluate the COP Progress    31
  Applying the Principles of Teaming    31
Tool 8: Diverse Thinking “Hidden Squares” Activity    32
Tool 9: COP Performance Rating Scale    33

References    34

Appendices    36
Appendix A- Background on the Pacific Alliance    37
Appendix B- Individuals with Disabilities and Overall Educational Outcomes    38
Appendix C- Postsecondary Education and Employment Statistics    39
Appendix D- Pacific Alliance Benefits    40
Appendix E- Pacific Alliance Staff    41
Appendix F- STEM Classifications of Instructional Programs    42
Appendix G- An Invitation to Students with Disabilities Interested in STEM (Science, Engineering, Technology, and Math) Fields    45
Appendix H- Frequently Asked Questions    46
ACKNOWLEDGEMENTS AND NOTES ABOUT ACCESS

Notes about Access: An electronic format of this Toolkit is available for download at: www.cds.hawaii.edu/pacificalliance

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## Glossary of Terms

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>CDS</td>
<td>Center on Disability Studies at the University of Hawai‘i</td>
</tr>
<tr>
<td>COP</td>
<td>Communities of Practice</td>
</tr>
<tr>
<td>Essential Tool</td>
<td>A Resource Guide with practical, applicable Tools</td>
</tr>
<tr>
<td>IEP</td>
<td>Individualized Education Plan</td>
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<tr>
<td>IHE</td>
<td>Institutions of Higher Education</td>
</tr>
<tr>
<td>IWDs</td>
<td>Institutions with Disabilities</td>
</tr>
<tr>
<td>NSF</td>
<td>National Science Foundation</td>
</tr>
<tr>
<td>Pacific Alliance</td>
<td>NSF funded project to support Individuals with Disabilities in STEM</td>
</tr>
<tr>
<td>STEM</td>
<td>Science, Technology, Engineering, and Mathematics</td>
</tr>
<tr>
<td>UH</td>
<td>University of Hawai‘i</td>
</tr>
<tr>
<td>UH-M</td>
<td>University of Hawai‘i at Manoa</td>
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Essential Tool

Purpose: The Essential Toolkit for Communities of Practice

The purpose of this Essential Toolkit is to assist Pacific Alliance Communities of Practice (COP) operate in an efficient and successful manner and guide your work with individuals with disabilities interested in STEM (Science, Technology, Engineering, Mathematics) fields. Pacific Alliance COP are focused on developing STEM interest and success for high school and postsecondary school needs of individuals with disabilities (IWD). Our hope is this Essential Toolkit will assist Communities of Practice learn:

1. Why it is valuable to form and use COP;
2. The purpose of COP;
3. What COP do;
4. The roles and responsibilities members need to follow to fulfill their duties;
5. Who should serve on COP and how to select members;
6. How to solve problems encountered within the team; and
7. How to evaluate activities, actions, and value of COP.

Who Should Use This Essential Toolkit?

We intend this Essential Toolkit to help COP form, organize, plan, prepare, conduct, and follow-up their efforts. We include several tools designed to assist facilitators meet these objectives.

People interested in the formation, implementation, and evaluation of COP might include:

- Postsecondary student/disability services personnel;
- Secondary and postsecondary administrators;
- STEM faculty;
- STEM personnel from participating feeder high schools;
- STEM employers;
- Disability agencies; and
- Individuals with disabilities

How to Use This Essential Toolkit

This Essential Toolkit is designed for practical use by people interested in forming, conducting, and evaluating COP. It is intended to generate ideas and offer suggestions and potential solutions to assist COP in meeting its objectives. The remainder of this section offers background information about why the Pacific Alliance and COP exist. The following section introduces the nine Principles of Teaming- a set of guiding concepts that we believe are fundamental to COP success. Subsequent to this, readers will find three “tools” intended as “how-to” guides for starting and conducting COP.
Communities of Practice

What are Communities of Practice?

Communities of Practice (COP) are groups of people who share a common concern or interest for a specific topic, such as STEM students with disabilities, and learn how to identify goals, set priorities, cultivate resources, and assess results as they interact regularly. The Pacific Alliance COP represent a balance of members connected to a specific campus, making contributions, or wanting to contribute, to the success of students with disabilities to stimulate interests in STEM fields, participate in STEM course work, mentor in STEM fields, or link to employment in STEM field areas.

The Goals of Communities of Practice

COP will work to recruit Individuals With Disabilities (IWD) that may have an interest in STEM fields or that are currently in STEM degree programs. COP will work together to identify barriers to participation in STEM fields for IWD and work to address these barriers. COP monitor IWD progress in STEM related courses and use data to make individualized plans to support continued progress. COP will cultivate partnerships in the community and across educational institutions to cultivate and share STEM opportunities for IWD. COP will have opportunities to assess their effectiveness and participate in data collecting related to the project.

What do Communities of Practice look like?

_The community:_ Members of the community engage in joint activities and discussions, help each other, and share information. They build relationships that enable them to learn from each other. Members of a community of practice do not necessarily work together on a daily basis.

_The practice:_ A COP is not merely a community of interest. Members of a community of practice are practitioners. They develop a shared repertoire of resources: experiences, stories, tools, ways of addressing recurring problems (Wegner, 2007). COP develop their practice through a variety of activities. The following table provides a few typical examples:
## Typical Activities for Communities of Practice

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Problem solving</strong></td>
<td>&quot;Can we work on this design and brainstorm some ideas; I’m stuck.&quot;</td>
</tr>
<tr>
<td><strong>Requests for information</strong></td>
<td>&quot;When is the next STEM open house??&quot;</td>
</tr>
<tr>
<td><strong>Seeking experience</strong></td>
<td>&quot;Has anyone dealt with a student in this situation?&quot;</td>
</tr>
<tr>
<td><strong>Reusing assets</strong></td>
<td>&quot;I have a proposal for an employment development grant I wrote last year. I can send it to you and you can easily tweak it for our STEM career proposal.&quot;</td>
</tr>
<tr>
<td><strong>Coordination and synergy</strong></td>
<td>&quot;Can we combine our database on students to analyze graduation and employment outcomes in STEM fields?&quot;</td>
</tr>
<tr>
<td><strong>Discussing developments</strong></td>
<td>&quot;What do you think of the new STEM mentoring program? Does it really help?&quot;</td>
</tr>
<tr>
<td><strong>Documentation projects</strong></td>
<td>&quot;We have faced this problem five times now. Let us write it down once and for all.&quot;</td>
</tr>
<tr>
<td><strong>Visits</strong></td>
<td>&quot;Can we come and see your tutoring program? We need to establish one here.&quot;</td>
</tr>
<tr>
<td><strong>Mapping knowledge and identifying gaps</strong></td>
<td>&quot;Who knows what, and what are we missing? What other groups should we connect with?&quot;</td>
</tr>
</tbody>
</table>

(Adapted from Wegner, E. 2007)
What will Communities of Practice Do?

Each COP will formulate their own plan to meet the needs of individuals with disabilities in STEM programs based on the unique needs of their campus. Some suggested activities are:

<table>
<thead>
<tr>
<th>Academic</th>
<th>Mentoring</th>
<th>Career –Related</th>
</tr>
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<tbody>
<tr>
<td>Basic academic skill development (Learning Progressions)/Scaffolding</td>
<td>Disability Specific &amp; STEM Specific</td>
<td>Paid internships</td>
</tr>
<tr>
<td>STEM specific academic supports</td>
<td></td>
<td>Research experience</td>
</tr>
<tr>
<td>Individualized advising in STEM</td>
<td>Accommodation/self-advocacy</td>
<td>Transition Supports</td>
</tr>
<tr>
<td>College preparation</td>
<td>Interest &amp; embedded STEM building</td>
<td>Employment accommodations</td>
</tr>
<tr>
<td></td>
<td>Assistive Technology</td>
<td></td>
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<td></td>
<td>STEM area role model</td>
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</tbody>
</table>

Where to Start

Membership

Identifying key members of the COP should take place early in the planning stage. Membership should reflect a balance between student service staff, STEM instructors, post-secondary administrators, STEM employers, and other STEM support personnel. Additional members may be identified as the mission and goals of each campus are formulated. Tool 1: Member Checklist may assist you in identifying members and Tool 2: Roles and Responsibilities will help COP to define these critical areas during your initial COP meetings.

COP members will have a wide range of experiences, knowledge, skills and networks to draw upon. A primary goal of the COP is to gain a picture of the landscape of each respective community by sharing the perspectives and resources that each member brings to the discussion. Tool 8: Hidden Squares may assist you in recognizing the multiplicity of perspectives in your COP.

Student Recruitment

The purpose of the Pacific Alliance is providing individuals with disabilities supports to encourage their interest in STEM field careers. Therefore, recruiting individuals with disabilities to participate in the project is a primary goal of COP. Working across areas of the college campus to tap into student STEM interest should occur within the first three months of the COP.
Resource Mapping

Early in Year 1: A COP will be developed representing STEM instructors, Student Services staff, postsecondary administrators, STEM program personnel, STEM employers, and feeder high school representatives. COP vision statements will be developed and specific goals will be identified.

By the Middle of Year 1: Individuals with Disabilities will be recruited to participate and individual plans will be developed to facilitate their STEM area interest. Resources in the community, across the campus and UH system will be identified.

End of Year 1: Target student participation goals will have been met; data will be collected regarding student interest in, retention and graduation/transition into STEM fields and/or STEM degree programs.

Communities of Practice (COP) Outcomes Timeline-at-a-Glance

How do COP know they are meeting their project outcomes?
COP will monitor their progress, celebrating their successes and identifying areas for improvement in meeting the goals of the Pacific Alliance project. The following I am suggested target outcomes that COP can expect to meet during their first year.

<table>
<thead>
<tr>
<th>Year 1 Target Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>COP vision is developed</td>
</tr>
<tr>
<td>COP is operational- formal meeting at least twice a year.</td>
</tr>
<tr>
<td>COP membership represents balance.</td>
</tr>
<tr>
<td>IWDs with STEM interest are identified and recruited</td>
</tr>
<tr>
<td>COP track the number of IWDs enrolled in STEM classes</td>
</tr>
<tr>
<td>COP track the number of IWDs completed STEM classes</td>
</tr>
<tr>
<td>COP track the types of supports provided to IWDs</td>
</tr>
</tbody>
</table>

What Can I Expect to Do as a Member of a COP?

To communicate across STEM programs and Student Services to support IWDs with an interest in STEM fields.
To track IWDs with an interest in STEM fields, enroll in STEM courses, and what supports they receive to be success in STEM programs.
To collect data on the outcomes of the Pacific Alliance project.
To develop networks in the community of STEM employers and projects that may benefit students with an interest in STEM fields.
To find out more about the resources on campus and in the community related to STEM.
To connect students to STEM related projects, internships, career-fairs, or employment opportunities.

To coordinate transitions across critical junctures for IWD into STEM fields.

2010-01-11
Tools for Communities of Practice

Introduction: The Nine Principles of Teaming

The following nine Principles of Teaming (Stodden & Smith, 1996) are a set of quality indicators for high-functioning teams. The Principles are integrated within each tool and aligned with the activities presented. They encompass fundamental concepts and quality indicators of effective teaming, and may optimize the success of COP.

Perhaps the most critical aspect of the Principles is that all team members are active participants and have an equal voice in decisions. These Principles may prove invaluable when shared and explored with all team members. If conflicts arise during team problem-solving activities, referring to the Principles can be a way to arrive at consensus.

Each Principle is briefly explained in this introductory section. A worksheet is provided for a group activity to make use of the Principles. The Nine Principles of Teaming (Stodden & Smith, 1996)

Principle 1: A team reflects and demonstrates a shared/collective vision.

A collective vision is the dream or goal that aligns the team in pursuit of its mission. It encourages team members to band together toward a common destination. Although a collective vision may evolve and change slightly as time goes on or as new team members are added, its core intent is to speak to a constant view of a preferred future. The vision reflects a gathering and building of ideas, feelings, and actions. The team revisits the vision and its related missions regularly to keep it current and present in each team member’s mind. The vision provides the team aspiration as well as guidance for discussion and problem-solving. It reflects the ideals for which the team stands. The team vision is crucial knowledge for recruiting members of the team. If a potential team member does not share the team’s vision, this could spell disaster for achieving team outcomes. This is why one of the tools in this section focuses on careful recruitment of team members.

Principle 2: A team promotes empowerment of all members.

Empowerment is essential to a highly effective team. COP members must share power in making decisions and taking action while working toward the vision or mission. Each member must feel that power is equalized and believe that he or she makes a difference. An empowered team focuses on strengths and capabilities; utilizes the contributions and resources of its members and supports; has a depth of knowledge about central issues; follows effective operational procedures and is aware and competent in diversity issues; creates an effective networking system; communicates openly; and shares responsibility. The COP demonstrates power through, rather than over, attitudes and behavior. An empowered team is a vehicle for making improvements in individual’s lives, classrooms, schools, organizations, and communities.
Principle 3: A team demonstrates shared decision making.

Each individual on the team demonstrates shared participation and responsibility in the decision-making process. This can occur in a variety of ways such as consensus building, using team agreement strategies, or other collaborative processes. It is essential that COP members feel shared ownership for decisions and assume responsibility for their results. This does not mean that each member is expected to be equally knowledgeable or play an equal role in a given process or task, since members all bring different skills and interests to each situation. By getting to know and recognize each member, COP can determine equitable ways to make decisions while maintaining the integrity of individual members, as well as their right to agree or differ.

Principle 4: A team demonstrates synergy- the whole is more than the sum of its parts.

COP gain when the relationships among its members add value to the efforts of the team as a whole. That is, the members of the COP collectively create visions, ideas, and solution not likely to occur if they were working in isolation. What makes this happen is often difficult to recognize. However, it usually comes from group discussion, in which a feeling of trust has developed and people are free to think creatively and not feel criticized. Synergy can manifest itself as high-energy, enthusiasm, humor, and the motivation to tackle the “impossible.”

Principle 5: A team highly regards diversity as a necessary part of creativity and collaboration.

Maintaining diversity within COP requires the creation of an environment where it is safe to share important aspects of oneself beliefs, wishes, ideas, strengths, weakness, curiosities, and uncertainties. Along with the sharing, there is respectful acceptance of differences and differing perspectives. The essence of COP is to encourage the participation of a diverse group of individuals with a common cause. Within COP, practices reflect respect for cultural, ethnic, gender, and economic status of members. As processes of COP and content areas are dealt with, these diverse perspectives become infused.

Principle 6: A team fosters the full inclusion and participation of people impacted by its actions.

COP must be provided opportunities to engage in thoughtful, provocative conversations with large numbers of participants and persons who have a stake in COP outputs. Inclusion in the teaming effort is a given, and the team process reflects how full participation is to be achieved. Major stakeholders are involved to the degree most beneficial to their needs. An environment is created to ensure that people are included who are invested in the team’s vision and impacted by its actions. Not only do team members believe in full participation, but they act to achieve it. This requires the creation of neutral and accessible environments, and provision of supports and accommodations for team members who have historically been overlooked. This principle fosters open communication where everyone has a voice and can influence COP decisions.
Principle 7: A team facilitates the self-determination and personal growth of itself and its individual members.

A Community of Practice that fosters self-determination will provide each member with personal benefit for his or her efforts. Such a team inspires individual expression and growth as well as collective action and team growth. Although ownership regarding COP is strong, each member feels that he or she is a unique entity within the COP. Increasingly, members can effectively seek, find, and utilize the personalized services they need for personal development and progress. COP and individuals change and grow as they acquire new attitudes, information, skills, and experiences. There is a shift from dependence on outside sources for meeting needs to sharing expertise with others.

Principle 8: A team is responsive to its authentic (ecological) context.

COP are a complex, living system that both impacts and is impacted by its local environment. Real-world, on-site issues and problems of team stakeholders must be addressed, and stakeholders must be able to relate and use personal experiences as the context from which to address these problems. COP operates in an interdependent and reciprocal fashion with full consideration given to the local system in which agendas appear. There is a web of connectedness to actual on-site problems and solutions.

Principle 9: A team reflects and demonstrates a dynamic and fluid quality.

Teaming is a dynamic process in which content is produced and transformed continuously. A constantly evolving team remains flexible, adaptable, and accommodating. COP must be conscious of its own operations and have a process for training and re-focusing. Leadership must be situational and roles within the group must not become static. As well, COP must constantly monitor both its internal processes and the external environment for changes that affect COP goals and decisions.
Tool 1: The Nine Principles Reflections Worksheet

Directions: Distribute and fill out after reading or discussing the Nine Principles of Teaming; then share the team’s responses to determine areas that need attention. After carefully writing answers, share responses one question at a time, hearing from every individual in a team circle first, and then allow open discussion.

Note: All COP members can use this sheet to reflect on their view of the Principles. This may be especially useful when the team first meets and as new members join.

COP Member: Role

1. A team reflects and demonstrates a shared/collective vision.

The vision of this team is

2. A team promotes empowerment of all members.

I can best serve this team with my strength(s) of

3. A team demonstrates shared decision-making.

When a major team decision must be made, who will lead the decision-making?

My role in team decision-making is:

4. A team demonstrates synergy – the whole is more than the sum of its parts.

Individual team member contributions toward team goals might include

No matter how inspired a specific team member’s ideas might be, when the whole team develops an idea it is more likely to work because:
5. A team highly regards diversity of opinions as a necessary part of creativity and collaboration.

My perspective is part of the whole, not the whole part. If there comes a time when we cannot see the same vision, I can agree to

6. A team fosters the full inclusion and participation of people impacted by its actions.
I am contributing my skills and time to this vision. What I need to feel successful, accomplish the goals, and help others contribute is

7. A team facilitates the self-determination and personal growth of itself and its individual members.
What I am hoping to get from this experience is

8. A team is responsive to its authentic (ecological) context.
We are partners in a bigger picture, which is

9. A team reflects and demonstrates a dynamic and fluid quality.
We are part of completing a dynamic journey. The journey is not over, merely changing. I began the journey when

I can continue to grow through this adventure by learning how to

10. Additional thoughts or questions:
How to Build Effective Communities of Practice

The purpose of Tool 2 is to provide COP facilitators with information on how to assemble an effective COP.

Enticing the Right People

One of the purposes of this Tool is to make future meetings a positive and rewarding experience. There are many reasons to become a group member as there are members of a group. But successful groups seem to have the following characteristics in common when they recruit and retain members. They are:

- Clear about their COP mission and goals;
- Clear about a time limit to the service requested;
- Clear and accurate about the time commitment involved;
- Clear and accurate about the work commitment involved;
- Clear about what kinds of characteristics they wish to add to their team; and
- Clear in developing guidelines for the team and what team members can do.

The following "Potential Member Checklist" worksheet may be helpful in your recruitment of potential members of your COP.
Tool 2: Potential Member Checklist

Date of Interview:

________________________________________________________________________

Name:
________________________________________________________________________

Position or Title:
________________________________________________________________________

Agency Name and Address:
________________________________________________________________________
_________________________________________________________________________

Agency Telephone and Fax:
________________________________________________________________________

Personal Telephone (work, cell, home):
_______________________________________________________

E-mail: ________________________________________________

Attribute Rating: Please rate the potential member in the space below

<table>
<thead>
<tr>
<th>Rating</th>
<th>Attribute</th>
<th>Comments</th>
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<tbody>
<tr>
<td>___</td>
<td>Depth of knowledge of transition issues</td>
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<tr>
<td>___</td>
<td>Capabilities and expertise</td>
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<tr>
<td>___</td>
<td>Strength-focused</td>
<td></td>
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<tr>
<td>___</td>
<td>Aware and competent in diversity issues</td>
<td></td>
</tr>
<tr>
<td>___</td>
<td>Communicates openly</td>
<td></td>
</tr>
<tr>
<td>___</td>
<td>Shares responsibility</td>
<td></td>
</tr>
<tr>
<td>___</td>
<td>Networks effectively</td>
<td></td>
</tr>
<tr>
<td>___</td>
<td>Has access to resources</td>
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Recommendations for other team members:
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

2010-01-11
How to Decide Initial Roles, Responsibilities, and the COP Vision

The purpose of Tool 3 and 4 is to support COP members in understanding their roles and responsibilities as initial meetings begin. Since roles and responsibilities are often decided as the vision and/or mission of the COP becomes clearer, these two early stages of Communities of Practice planning are offered together in this tool.

Organizers of COP sometimes make the mistake of assuming team members automatically understand their roles and responsibilities. This is usually not the case. Two sample worksheets, “Team Member Roles and Responsibilities” and “Team Member Checklist,” are designed to help COP members learn about their new roles.
Tool 3: Team Member Checklist

Directions: Each incoming member should receive the materials listed below. The team leader and members can use this checklist to ensure that members have all the necessary documents (Documents will need to be developed by the team).

Mission Statement:

COP Roles and Responsibilities:

Meeting Schedule (or Calendar):

<table>
<thead>
<tr>
<th>Date</th>
<th>Time and/or Place</th>
<th>Reminders</th>
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Tool 4: Team Member Roles and Responsibilities Worksheet

Directions: This can be first completed by a COP facilitator, and then maintained and amended by each team member during his or her term(s) of service.

COP Member:

______________________________________________________________________________

Term(s) of Service:

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Organization Represented (if any):

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

COP Responsibilities:

______________________________________________________________________________
______________________________________________________________________________
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How to Conduct COP Meetings

The purpose of this Tool is to assist COP to conduct effective meetings, resolve typical transition issues or barriers, and move from preparations to actions. This Tool will begin with a discussion about how to conduct initial meetings, and then move on to a section about “Moving from Preparations to Actions.”

Preparing For and Conducting Initial Meetings

How to describe the purpose of the meeting
A first meeting has the potential to set the tone for the entire team for months, and perhaps even years, to come. While many members may desire to broach many different objectives and agendas at a first meeting, most attendees will probably leave with a high level of frustration if they do not find a cohesive, organized meeting that provides some concrete accomplishments.

Team members know they are gathering for a specific goal, in this case, to assist with the transition of youth with disabilities. To ensure everyone has the same objectives, it is often helpful to provide a handout, accessible to all participants, with a written statement of the team’s mission. Once that is accomplished, ground rules for the team are helpful. A set of ground rules can begin with the nine Principles of Teaming described earlier. If everyone can agree to conduct team meetings with a similar set of expectations, it will help facilitate the entire process.

Brainstorming issues, within the parameters of the mission, can be helpful at a first meeting. For example, discussing transition activities and issues that team members are already knowledgeable about might lead to identifying committee agendas, committee members, and initial timelines. Refinement of the vision might also occur.

The question may arise concerning who should conduct the first meeting. We recommend that whoever calls the meeting begin to conduct it, but be prepared to discuss with the group who will conduct future meetings.

How to facilitate a well-organized meeting
The various roles within COP are likely to evolve/and/or rotate over specific periods of time. However, at the outset, the team originator should act as a facilitator until the COP selects one or more members to perform that duty. Thus, once introductions have been made, the initial task of the team leader (or the person calling the meeting) when convening all members for the first time is to clarify role responsibilities, and then determine who will accept the roles of:

- Facilitator, whose responsibility is to moderate COP meetings and processes with objectivity and a depth of knowledge;
- Recorder, whose responsibility is to take and keep accurate notes of meetings; Time-keeper, whose responsibility is to keep the COP to its meeting schedule; and
- Spokesperson, whose responsibility is to speak effectively on behalf of COP.

Agreeing on the members who will be first in these roles at the earliest stage in your meetings, and rotating these responsibilities over time, is an example of how to apply Principle 3: Sharing the Decision-Making.
Tool 5: How to Identify Ground Rules and Operational Procedures

Setting the ground rules for your meeting

Establishing ground rules needs to be a team process set at the first COP meeting. The following is a modified consensus-building process that may be used until the COP agrees upon its own decision making process.

1. Brainstorm possible ground rules. Facilitators should remember that, while brainstorming, judgments and discussion about ideas are suspended. If needed, both judgments and discussion can occur later, but brainstorming is meant to be a spontaneous, non-threatening activity. If the group is large (more than 9 people) break into smaller groups and compile results from each group to develop a large group list. The recorder could use an easel with large sheets of blank paper to post at the end of the meeting. Sample ground rules are:

   - Stay until the end;
   - Use active listening;
   - Acknowledge everyone’s contribution;
   - Be respectful of other people’s points of view;
   - Start on time;
   - If you cannot be on time, let someone know;
   - Use a consensus-building decision-making process;
   - Keep group notes in a COP binder; and
   - Share the responsibilities for maintaining the team

2. Clarify and cluster ideas.

3. Select ground rules. If there are many ideas, prioritize them. The following is a quick method to prioritize items: Each person is a weighted system of one, three, and five points to identify their three favorite ideas. Place five points on the favorite item, three points on the next favorite, and one point on the third favorite. Add the points on each item to see what the group sees as its top priority.
Tool 6: SAMPLE MEETING AGENDA

What does a typical agenda look like?
Preplanning the first COP meeting is important for COP facilitators wanting to instill a sense of positive and purposeful collaboration, as well as the tone for efficiency by ensuring that the meeting starts and ends on time. Below are generic Sample agenda items that may be appropriate for COPs.

1. Introduction of members- this may include an activity to get acquainted, establish positive tones, etc. (see Tool 2)-15 minutes;
2. Purpose of meeting- 5 minutes;
3. Approval of the agenda by members- 5 minutes;
4. Approval and/or reading of the minutes from previous meeting-15 minutes;
5. Selection of volunteers to facilitate initial meeting (see Tool 1)-5 minutes;
6. Presentation on the status of individual(s) in transition and/or the service systems(s)-20 minutes
7. Identification of barriers/challenges and plans for addressing- 20 minutes;
8. Identification of opportunities for growth or needs- 20 minutes;
9. Discussion of desired outcomes for individual(s)- 30 minutes;
10. Listing of current known available resources-15 minutes;
11. Listing of current known needs-15 minutes;
12. Development of possible strategies-30 minutes;
13. Finalization of procedure for follow-up and confirmation assignment of responsibilities-20 minutes;
14. Closure or summary-15 minutes; and
15. Scheduling of next meeting date, place, and time (determine who will need to be present)-10 minutes.
<table>
<thead>
<tr>
<th>Date</th>
<th>2010-01-11</th>
</tr>
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<tbody>
<tr>
<td>Method</td>
<td>Face to face</td>
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<tr>
<td>Starting &amp; Ending Time</td>
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<tr>
<td>Participants &amp; Roles</td>
<td></td>
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<tr>
<td>Agendas</td>
<td></td>
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<tr>
<td>Outcomes &amp; Decisions</td>
<td></td>
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<tr>
<td>Agenda/Plan for a Next Meeting</td>
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<td>Comments</td>
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</table>
Resource Mapping: Moving from Preparations to Actions

What resources does the COP already have?
An excellent method to apply Principle 4: Demonstrating Synergy is resource mapping, as it elicits higher-order thinking, creative visioning, and problem-solving. It is valuable for COP to employ resource mapping at various times in their planning sessions, including when the team first convenes, to create its vision and before it devises a strategic action plan. Mapping is a methodology that can be useful to link and align school, community, district, and regional or state resources with organizational goals, strategies, or expected outcomes for teams attempting renewal. Mapping is also a useful activity to inspire newly-created COP to begin envisioning potential outcomes based on resources uncovered.

What is Resource Mapping?

Community mapping is not a new strategy or process. It has been in use for many years in varying forms. Community resource mapping is sometimes referred to as asset mapping or environmental scanning. Community resource mapping is best noted as a system-building process used by many different groups at many different stages to align resources and policies in relation to specific system goals, strategies, and expected outcomes.

The Mapping Process

There are four steps to the community resource mapping process: 1) pre-mapping; 2) mapping; 3) taking action; and 4) maintaining, sustaining, and evaluating mapping efforts. The pre-mapping step allows stakeholders to lay foundation for productive collaboration and to establish a clear vision and goals for building a system. The second step, mapping, determines which resources to map and how to best map them. The collection and analysis of data at this time helps stakeholders to identify strengths and challenges. The next step, taking action, allows stakeholders to determine the most useful plan of action for effectively addressing the data findings and established goals. Communicating and disseminating information are key throughout the implementation stage. The final step involves maintaining, sustaining, and evaluating the efforts outlined in the map by continuously evaluating progress, making necessary changes to the plan, and learning from the experiences.

Essential Steps to Resource Mapping

1. Orient the COP to its shared vision, mission statement, and priorities;
2. Identify all complementary resources (e.g., human, fiscal, or programmatic) from multiple sources that can be aligned to accomplish the vision. Also determine whether existing resources are being used effectively to achieve expected outcomes;
3. Note any priorities that lack resources and design solutions to fill those gaps; and
4. Implement an ongoing process that maximizes all relevant resources by employing them in a strategic way to accomplish common goals.
Resource mapping enables COP to build systems that serve individuals with disabilities in STEM fields rather than targeting funds based on criteria and categories. A set of worksheets for COP to use is provided at the end of this Tool.

Before using these worksheets, COP are also advised to review Principle 5 on valuing diversity. Some suggestions to get the most out of the resource mapping activity that this principle encourages are:

- Structure COP so they invite diversity
- Encourage the sharing and accepting of differing perspectives; and
- Ensure that the setting is comfortable for small and large group work (i.e., consider furniture, lighting, fresh air, time of day, needs for providing food, etc.).

**Applying the Principles of Teaming**

*How to Apply Principles 2-9*

While all the Principles can be applied to this Tool, it may be most useful for COP to first focus on those Principles mentioned below:

- Principle 3: COP demonstrate shared decision making.
- Principle 4: COP demonstrate synergy - the whole is more than the sum of its parts.
- Principle 5: COP highly regard diversity as a necessary part of creativity and collaboration.

Because this Tool addresses nearly all the activities of COP, it incorporates the Nine Principles of Teaming. While Principles three through five are clearly inherent in specific recommendations above, they, along with other Principles, need to be considered in all of the team’s processes. Various approaches can be used to ensure this happens, and COP should encourage dialogue to direct how this occurs. COP may choose to review the Nine Principles in an ongoing fashion at meetings, with the team only considering a single Principle at one meeting, then the next Principle in a subsequent meeting, and so on. For a more formal assessment of how well the COP is applying the Principles, the worksheet in Tool 7 can be used.
Tool 7: Resource Mapping Worksheet

Use this worksheet as a starting point to envision potential outcomes for your COP – either individually or at regular meetings throughout the year – to set priorities, streamline collaboration efforts, and improve process and performance outcomes.

**Directions:** As a whole group, begin by writing the answers to the questions in Activity A below. Then, break into groups of no more than five and complete Activities B, C, and D. Encourage groups to leave no blanks and to apply the Nine Principles of Teaming to achieve the best ideas. Have each group choose a presenter to summarize and share with the whole team the resources uncovered, ideas worth exploring further, and areas where needs remain. Allow open discussion after each small group presents. Finally, have individuals complete Activity E and return to the facilitator for follow-up recommendations.

**The COP vision is:**

**Our mission statement is:**

**My name and role are:**

**A) Focusing Questions**

1. What are the COP’s most important goals or priorities right now?
   a)  
   b)  
   c)  

2. What are the expected outcomes of these goals?
   a)  
   b)  

3. What are our current strategies to achieve these goals?
   Goal A: Goal B: Goal C:

4. How can these strategies be improved upon?
Goal A: Goal B: Goal C:

**B) Assessing Current Resources**

4. Are existing resources being used effectively to achieve our goals? Yes or No?
   Goal A: Goal B: Goal C:

**Tool 7: Resource Mapping Worksheet (continued)**

5. Which priority goals lack resources and what are those resources?
   Goal A: Goal B: Goal C:

6. What solutions might fill these resource gaps?
   Goal A: Goal B: Goal C:

**C) Resource Brainstorming**

7. What resources do we know other agencies or individuals have?

   Human Resources *(number of volunteers and staff, expertise, etc.)*
   Fiscal Resources *(funding sources, reasons for lower costs, etc.)*
   Programmatic Resources *(policies, procedures, collaboration, etc.)*

8. Who are the resources that we align with them to accomplish our vision?

   Family/School Community/College Community/Employers

9. Who can we contact to discover other resources (e.g., different agency policies, procedures, funding streams, and collaborative practices, etc.)?
   a) 
   b) 
   c)
D) Applying Resources to Needs

10. Which of the resources above can be used to fill the needs (e.g., strategy challenges and/or resource gaps) identified in Activities A and B?
Goal A: Goal B: Goal C:

11. Which priorities need additional policy or legislation to fill a gap or enhance an existing program?
   a)
   b)
   c)

12. Who can we collaborate with to compile a comprehensive set of policy recommendations across agencies?
   a)
   b)

E) Concluding Ideas

13. As a result of the resource mapping activities, I am most inspired by these possibilities for achieving our COP’s goals:
   a)
   b)
   c)

14. I feel I can contribute personally by doing the following things to achieve these goals:
   a)
   b)
   c)
Knowing if your COP is On-Track and Meeting its Goals

The purpose of Tool 8 and 9 are to support COP teams to evaluate their effectiveness and prepare appropriate reports of their progress. Materials presented here can help COP evaluate their performance and determine their progress in achieving the goals they set out to accomplish. Materials are presented to “Check in With Team Members” and “Evaluate the Team’s Progress.” These include suggestions for Consensus Building and thoughts regarding the preparation and reasons for outside evaluation of COP progress.

Check in With Team Members

Does the team feel it is doing well?
Team members appreciate comments and feedback about their efforts. Effective teams do regular “process checks” to assess and discuss how well the team is working together in defining and pursuing their goals. The worksheet “Development Rating Scale Assessment,” which follows at the end of this Tool, outlines dimensions COPs can consider when thinking about their process and development. This worksheet may serve as a useful starting point when COP members perceive that their goals are not being met as they envisioned.

Building consensus
When teams have concluded that they are not doing well as they desired, one approach is to engage in consensus-building to address specific challenges. The suggestions below can serve as general guidelines to assist teams to address issues. This is another method that incorporates Principle 3: Shared Decision-Making, and so teams may wish to review the goals of this Principle before engaging in these tasks.

SUGGESTED ACTIVITIES

1. Decide on a time allocated for discussion
2. If agreement is not reached during that time, agree to postpone the decision, break into small groups for consensus-building, or take two-thirds agreement with minority opinions noted.
3. Implement routine procedures to give information on whether or not participants felt included in the decision-making process.
4. Facilitate basic decision making steps; define the problem, generate possible solutions, evaluate these solutions, and create an action plan.

Additionally, COP can consider developing operational procedures to produce “constructive conformity” regarding mechanical and administrative matters. The team first identifies the matters that can be dealt with in this way to save time and facilitate activities. The team members agree to consistently follow these procedures. The following worksheet, “Diverse Thinking ‘Hidden Squares’ Activity,” is designed to show how what seems obvious at first may not be and that team members would do well to attend to the desires, needs, and concerns of their fellow teammates.
Evaluating COP Progress

Getting outside evaluation
Whenever an individual or group sets priorities, it is desirable to know how effective they have been from the perspective of outside stakeholders or recipients of services. To that end, the following are some questions which might be asked of agency stakeholders or recipients of services. To that end, the following are some questions which might be asked of STEM personnel, educators or individuals with disabilities about how well COP have met their goals and objectives. These simple questions which could be asked of such persons external to the team are found at the end of this Tool on the “Sample External Evaluation Worksheet.”

As it is important for teams to regularly collect data on all their activities and the outcomes of their efforts, using worksheets such as the ones provided in this section can assist the data collection process. Gathering and analyzing data on a regular basis will make reporting on COP progress much easier. Periodic external reviews by persons impacted by the team’s efforts (such as youth with disabilities, their parents, etc.) can be very valuable and an excellent way of applying Principle 6: Fostering Participation of People Impacted by the Team’s Actions. Also, Principle 8: Being Responsive to the Authentic (Ecological) Context is a concept that should be reviewed when planning and soliciting outside evaluation, as it reminds teams of the wealth of opportunities that they can consider when striving to reach their goals.

Applying the Principles of Teaming

How to Apply the Principles of Teaming
The text above has indicated how to specifically apply these Principles:

- Principle 3: Shared Decision-Making
- Principle 6: Fostering the Participation of people Impacted by the Team’s Actions
- Principle 8: Being Responsive to the Authentic (Ecological) Context

However, as with all the tools, the Nine Principles of Teaming must be woven into all the processes of an effective COP team. The worksheet provided below, “Team Performance Rating Scale,” is designed to be used in a team meeting as a risk-free method for members to voice their opinions about their progress and whether they are applying all Nine Principles of Teaming with success. This assessment instrument specifically asks members questions that relate to each of the Nine Principles of Teaming with success.
TOOL 8: Diverse Thinking “Hidden Squares” Activity

How many squares are there in this visual?

Directions: Quickly count the total number of squares and report and compare with your partner/team. Present your findings to the group.

Answer: 1 whole, 16 individual, 9 of 4 squares each, and 4 of 9 squares = thirty. Like the problems we face, many parts (and combinations of parts) comprise the whole. This teaches us to dig deeper into problems, visualize them differently, and see various combinations of parts to what appears to be a whole problem.
**Tool 9: COP Performance Rating Scale**

Directions: Circle or underline the number that most accurately reflects your sense of the team’s process and development at this time, using 5 to show a strong agreement and 1 to show strong disagreement with each statement.

<table>
<thead>
<tr>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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</thead>
<tbody>
<tr>
<td><strong>Commitment:</strong></td>
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<tr>
<td>COP members understand group goals and are committed to them.</td>
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<tr>
<td><strong>Acceptance:</strong></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>COP members are friendly, concerned, and interested in each other.</td>
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<tr>
<td><strong>Clarification:</strong></td>
<td>1</td>
<td>2</td>
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<tr>
<td>COP members acknowledge and confront conflict openly.</td>
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<tr>
<td><strong>Belonging:</strong></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>COP members listen to others with understanding.</td>
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<tr>
<td><strong>Involvement:</strong></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>COP members include others in the decision-making process.</td>
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<tr>
<td><strong>Support:</strong></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>COP members recognize and respect individual differences.</td>
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<tr>
<td><strong>Achievement:</strong></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>COP members contribute ideas and solutions to problems.</td>
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<tr>
<td><strong>Pride:</strong></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>COP members value the contributions and ideas of others.</td>
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<tr>
<td><strong>Recognition:</strong></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>COP members recognize and reward COP performance.</td>
<td></td>
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<tr>
<td><strong>Satisfaction:</strong></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>COP members encourage and appreciate comments about team efforts.</td>
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<tr>
<td><strong>Overall Goal Achievement:</strong></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>The COP is solving problems and achieving its goals.</td>
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</table>
References


Research and Training Center on Disability Demographics and Statistics (2008), Retrieved September 18, 2009, from http://www.ilr.cornell.edu/EDI/p-srrtc.cfm


Appendices
Appendix A- BACKGROUND ON THE PACIFIC ALLIANCE

The Pacific Alliance for Supporting Individuals with Disabilities in STEM Fields (Pacific Alliance) began in October 2009 with funding from the US National Science Foundation (NSF) to the Center on Disability Studies (CDS) at the University of Hawai‘i at Manoa (UH-M) to:

“Increase the numbers of IWD in STEM postsecondary education programs and ultimately the STEM workforce in Hawai‘i. Proposed outcomes are: (1) increased graduation rates in degreed programs (associate, baccalaureate, and graduate degrees); and (2) increased rates of graduates (high school, associate, baccalaureate, and graduate) entering STEM employment. Special attention will be given to the IWDs of greatest need: those of minority culture, women, veterans, and IWDs living in rural areas.”

The Pacific Alliance staff is currently funded to work with UH-M and two targeted Community Colleges in the UH system. Communities of Practice (COP) will be developed at each of these campuses that will meet at least once each semester. The project will also form an Alliance Advisory Committee to provide input and support implementation of project activities composed of STEM employers and disability organizations within the community. This group will meet annually.

Participating campuses will be supported to organize a “Community of Practice” (COP), whose stakeholders may include key postsecondary administrators, STEM instructors, and student/disability services personnel, as well as STEM personnel from participating feeder high schools, key STEM community employers, and disability agencies. COP members will provide input and assistance with student recruitment, matriculation, and retention in STEM areas and implement capacity-building through training, consultation, and ongoing engagement with stakeholder collaborators and affiliates.

Pacific Alliance staff will facilitate and support the work of each campus-based COP to implement those practices and activities which fit their specific needs and programs to reduce barriers and improve outcomes for IWD in STEM fields as they progress through critical junctures (transition from one program or level to the next). Data will be collected by project staff to provide evidence of the progress, impact, and effectiveness of the project and to assist the project to be responsive to each participating campus.
Appendix B- Individuals with Disabilities and Overall Educational Outcomes

Individuals with Disabilities (IWDs) experience poor postsecondary educational outcomes compared to their peers without disabilities (National Center for Education Statistics, 2006). Only 37% of IWDs who graduate from high school enter any type of postsecondary education compared to 78% of students without disabilities (Zafft and Nott, 2006). Additionally, IWDs enrolled in a 2-year program are unlikely to transfer from a 2-year program to a 4-year program. The completion rate of IWDs is also low; only 16% of IWDs compared to 27% without disabilities enrolled in 4-year institutes of higher education (IHE) completed their degree program (National Center for Educational Statistics, 1999).

Individuals with Disabilities and STEM Programs and Workforce Nationally

The number of undergraduates with and without disabilities who choose STEM majors is similar, but IWDs are less likely to complete their degree program. Eleven percent or 580,000 of STEM undergraduates nationwide were IWDs, but that number drops to 7%, or 30,000 IWDs in STEM graduate fields (Burrelli, 2007). This drops further in the workforce where IWDs comprise only 2.7% of the science and engineering workforce (Isaacson, Lloyd & Schleppenbach, 2007). See Chart 1 on p. 8 for a description of these statistic in graph form.

Individuals with Disabilities and STEM Programs and Workforce in Hawai‘i

Although 77% of students with Individual Education Plans (IEPs) in high school earn a diploma (Hawai‘i Department of Education, 2008), and are increasingly participating in postsecondary education, the rates of completion and progression toward a higher degree and employment after graduation remain low. In 2007, only 18.1% of working age IWDs had bachelor or higher degrees compared to 30.4% of individuals of working age without a disability. Employment rates for IWDs in Hawai‘i, regardless of education is only 44% in comparison to 80% for those without disabilities (Research and Training Center on Disability Demographics and Statistics, 2008). However, Hawai‘i’s workforce is seeing STEM employment growing at 4 times the rate of low-tech jobs (Hawai‘i Department of Business, Economic Development, and Tourism, 2007).
Appendix C- Chart 1: Postsecondary Education and Employment Statistics

Appendix D- Pacific Alliance Benefits

**How will the Pacific Alliance benefit colleges?**

- **Increased enrollment** of IWD from high schools on O’ahu in STEM degree programs
- **Increased graduation rates** (associate, bachelor, and graduate degrees) for STEM students with disabilities at targeted campuses.
- **Increased employment rates** of Alliance graduates, including those with associate degrees, into STEM employment

**How will the Pacific Alliance benefit STEM students with disabilities?**

- **Stipends** may be used for students to support their educational goals, for example, for tuition/books/paying tutors/ assistive technology.
- **Implementation of individual student plans** to meet their particular STEM needs.
- **Facilitating mentoring** matches and resources, for example locating currently working, or retired, scientists with disabilities to serve as mentors.
- **Development of a Community of Practice (COP)** to identify stakeholders to provide input, including what is of the most need, for example tutors or Assistive Technology, for students.

**BROADER IMPACTS:** The Pacific Alliance Partnership will advance knowledge and ensure long-term impact by: (1) broadening STEM participation of IWDs including women, underrepresented minorities, veterans, and residents of rural areas; (2) enhancing disability support offices and STEM programs within UH and Public School systems and employment settings by building on existing associations and networks and creating synergy and durable relationships; (3) developing and disseminating knowledge and practice that enhances the inclusion of people with disabilities in STEM careers; (4) initiating activities resulting in systemic change in the organizations represented by COP members; and (5) yielding rigorous evaluation data allowing for evidence based replication in similar settings.
Appendix E- Pacific Alliance Staff

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Appendix F- STEM Classification of Instructional Programs

2010-01-11
NSF STEM Classification of Instructional Programs Crosswalk
Listed below is the NSF CIP Code Crosswalk for STEM disciplines

**Agricultural Sciences**
01.09 Animal Sciences
01.10 Food Science and Technology
01.12 Soil Sciences
01.99 Agriculture, Agriculture Operations and Related Sciences, Other
03.0101 Natural Resources/Conservation, General
03.02 Natural Resources Management and Policy
03.03 Fishing and Fisheries Sciences and Management
03.05 Forestry
03.06 Wildlife and Wildlands Science and Management
03.99 Natural Resources and Conservation, Other

**Chemistry**
40.05 Chemistry
40.0507 Polymer Chemistry

**Computer Science**
11.01 Computer and Information Sciences, General
11.04 Information Science/Studies
11.07 Computer Science
52.1201 Management Information Systems, General
52.1301 Management Science, General

**Engineering**
14.02 Aerospace, Aeronautical and Astronautical Engineering
14.03 Agricultural/Biological Engineering and Bioengineering
14.05 Biomedical/Medical Engineering
03.0509 Wood Science and Wood Products/Pulp and Paper Technology
14.07 Chemical Engineering
14.32 Polymer/Plastics Engineering
04.02 Architecture
14.04 Architectural Engineering
14.08 Civil Engineering
14.0803 Structural Engineering
14.0805 Water Resources Engineering
14.14 Environmental/Environmental Health Engineering
14.09 Computer Engineering, General
14.10 Electrical, Electronics and Communications Engineering
14.12 Engineering Physics
14.13 Engineering Science
14.27 Systems Engineering
14.11 Engineering Mechanics
14.19 Mechanical Engineering
14.06 Ceramic Sciences and Engineering
14.18 Materials Engineering
14.20 Metallurgical Engineering
14.28 Textile Sciences and Engineering
14.31 Materials Science
40.9999 Physical Sciences, Other
14.21 Mining and Mineral Engineering
14.23 Nuclear Engineering
14.25 Petroleum Engineering
14.01 Engineering, General
14.22 Naval Architecture and Marine Engineering
14.24 Ocean Engineering
14.99 Engineering, Other

**Environmental Science**
03.0103 Environmental Studies
03.0104 Environmental Science

**Geosciences**
40.06 Geological and Earth Sciences/Geosciences
40.0601 Geology/Earth Science, General

**Life/Biological Sciences**
26.0403 Anatomy
26.0202 Biochemistry
26.01 Biology, General
26.1101 Biometry/ Biometrics
26.1102 Biostatistics
26.1309 Epidemiology
26.0203 Biophysics
26.03 Botany/Plant Biology
26.0305 Plant Pathology/Phytopathology
26.0307 Plant Physiology
26.04 Cell/Cellular Biology and Anatomical Sciences
26.0401 Cell/Cellular Biology and Histology
26.0204 Molecular Biology
26.1301 Ecology
26.0505 Parasitology
26.0702 Entomology
26.0804 Animal Genetics. (NEW)
26.0805 Plant Genetics. (NEW)
26.1303 Evolutionary Biology
26.0806 Human/Medical Genetics
26.05 Microbiological Sciences and Immunology
26.0507 Immunology
26.0504 Virology
26.0503 Medical Microbiology and Bacteriology
19.05 Foods, Nutrition, and Related Services
30.1901 Nutritional Sciences
26.0910 Pathology/Experimental Pathology
26.1004 Toxicology
26.1001 Pharmacology
26.1004 Toxicology
26.0707 Animal Physiology. (NEW)
26.0901 Physiology, General. (NEW)
26.09 Series Physiology, Pathology and Related Sciences
26.07 Zoology/Animal Biology
26.1201 Biotechnology
26.99 Biological and Biomedical Sciences, Other
30.01 Biological and Physical Sciences
30.10 Biopsychology

**Mathematics**
27.01 Mathematics

**NSF STEM Classification of Instructional Programs Crosswalk - Louis Stokes Alliances for Minority Participation - 2005 5/2/06 1:40 PM**

**Physics/Astronomy**
40.02 Astronomy and Astrophysics
40.08 Physics
40.0807 Optics/Optical Sciences
40.0809 Acoustics

OMB #3145-0136 LSAMP Program
Expires January 31, 2008

Appendix G- Recruitment Flier
An Invitation to Students with Disabilities Interested in STEM (Science, Engineering, Technology, and Math) Fields

The Pacific Alliance (www.cds.hawaii.edu/pacificalliance/) invites O’ahu high school students and college students at the University of Hawaii at Manoa (UHM) and other campuses in the University of Hawaii system to join our support network.

The Pacific Alliance wants to assist students with disabilities interested in STEM fields, science, technology, engineering, and mathematics to succeed in high school, college and graduate programs.

A stipend may be available to help eligible high school and postsecondary education students achieve success in STEM education.

If you are a student with a disability and are interested in support in subjects such as math, chemistry, biology, and other science and technology fields, the Pacific Alliance may be the group for you. A few activities we can help with include:

- Connect high school, undergraduate, and graduate students with disabilities with mentors;
- Provide tutoring support;
- Provide training on assistive technologies;
- Provide guidance on accommodation needs and self-advocacy skills.

If interested in learning more please contact: Steve Brown at sebrown@hawaii.edu or 808-956-0996, WCC coordinator; Kiriko Takahasi at kiriko@hawaii.edu or 808-956-4457, UH Manoa coordinator; or Holly Manaseri at hmanaser@hawaii.edu or 808-888-2719, HCC coordinator

Appendix H- Frequently Asked Questions
Frequently Asked Questions

1. **What is the Center on Disability Studies (CDS)?**

   The Center on Disability Studies (CDS) at the University of Hawai‘i (UH) is known as an Organized Research Unit (ORU) and is housed at the University of Hawai‘i at Manoa College of Education in Honolulu. The CDS mission is, “To promote diverse abilities across the lifespan through interdisciplinary training, research, and service.” To fulfill this mission CDS currently sponsors numerous, primarily grant-funded projects.

2. **What is the Pacific Alliance?**

   The Pacific Alliance began in October 2009 with funding from US National Science Foundation (NSF) to work with the University of Hawai‘i at Manoa and two Community Colleges in the UH system. The goal of the Alliance is to “Increase the numbers of IWD in STEM postsecondary education programs and ultimately the STEM workforce in Hawai‘i. Proposed outcomes are: (1) increased graduation rates in degree programs (associate, baccalaureate, and graduate degrees); and (2) increased rates of graduates (high school, associate, baccalaureate, and graduate) entering STEM employment.”

3. **How will the Pacific Alliance benefit STEM students with disabilities?**

   - Stipends students may use to support their educational goals, for example, for tuition/books/paying tutors/assistive technology.
   - Implementation of individual student plans to meet their particular STEM needs.
   - Facilitating mentoring matches and resources, for example locating working, or retired, scientists with disabilities who want to serve as mentors.
   - Development of a Community of Practice (COP) to identify stakeholders who can provide input into developing priorities for how student monies may be allocated, including what is of the most need, for example tutors or Assistive Technology, for students.