



Bridge to Technology

Presented by MATEC NetWorks



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**MARICOPA
COMMUNITY
COLLEGES**

NetWorks is part of MATEC, a member of Workforce Development, at the Maricopa Community Colleges, and funded in part by the National Science Foundation



**National
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Foundation**

Funded, in part, by a grant from the National Science Foundation. Due 1104159



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Presenters



John Carrese

Director

San Francisco Bay Center of Excellence
City College of San Francisco

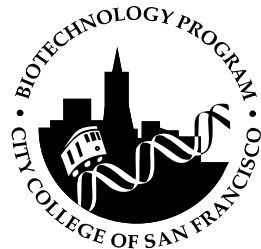
www.coecc.net



Rob Yung

Instructor

Bridge to Biotech Program at
City College of San Francisco



Host: **Laura Sanchez**



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Audience Poll

Survey:

Type of institution?

Disciplines?

Level of expertise w/ bridge programs?

(Type your answers in chat box)





Bridge Programs Improve Retention, Motivation and Success

Rob Yung
Bridge to Biotech
City College of San Francisco

John Carrese
Center for Excellence
City College of San Francisco





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Objectives

Objective 1: Goals For College Completion
And Job Market

Objective 2: How Bridge Models Address
Barriers To These Goals

Objective 3: Bridge Programs

Objective 4: Challenges



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College Completion-“The Big Goal”

Our country has high expectations:

“by 2020, America will once again have the highest proportion of college graduates in the world.” -President Barack Obama, Feb 24, 2009

“Community Colleges to produce an additional 5 million graduates by 2020.” - White House

*“The number of low-income adults with degrees/certificates will double by 2025”
- Gates Foundation*



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Where Will Job Growth Be?

- Middle-skill jobs (>HS degree, <4-year degree) makes up the largest segment of job growth in U.S.
- Critical shortages in crucial industries, particularly in middle-skill jobs
- Find more labor market analysis:

<http://cew.georgetown.edu/jobs2018/>

<http://www.nationalskillscoalition.org/resources/fact-sheets/state-fact-sheets/>



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What Barriers Exist?

What barriers do you believe exist in meeting the goals of college completion?

Please type them into the chat box.



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The Biggest Barriers

Attrition

Completion

Persistence

Collaboration

Funding





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Is Traditional Remediation a Success?

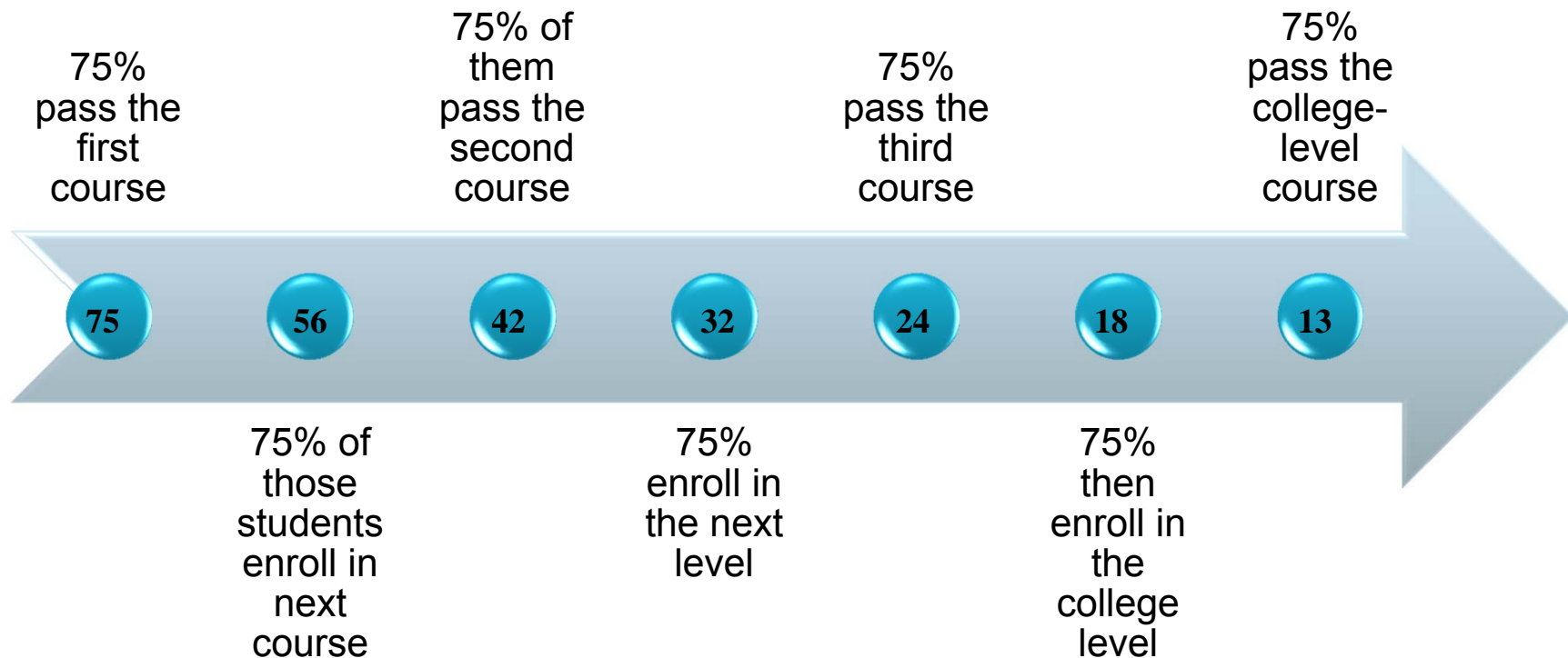
- 84% of CCC students placed into remedial Math.
 - Only 10% successfully make it to college level Math.
- 72% of CCC students placed into remedial English.
 - They have a 25% chance of making it to transfer level English.

CCC Chancellor's Office, ARCC Basic Skills Supplemental Report 2009. Center for Student Success, Research and Planning Group. Environmental Scan: Summary of Key Issues Facing CCCs. 2005.



Attrition

How many of 100 students who start three levels below college-level actually pass the college level course?





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Barriers at CCSF

Adult learners with low basic skills were failing certificate courses in high numbers in comparison to younger students who just graduated from high school or students with previous college education





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Reasons For The Barriers

- Abstract academic concepts.
 - Students don't see connections between subjects.
- Lack of basic skills foundation.
 - Students were never taught how to study.
- Gap between content and students existing knowledge.
- Rationale of assignments is unknown to student.



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How Do Bridge Programs Address These Barriers?



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How Do Bridge Programs Address These Barriers?

- Academic support is infused into each lesson.
- Professional Development.
 - Career Counseling.
 - Non-academic Support.
- Bridge programs address the needs of basic-skilled and/or pre-collegiate students.



Barriers Related To Curriculum

- Bridge programs connect to points on a career ladder (stackable certificates).
- Curriculum is contextualized.
- Learning assessments are project-based for application.
- Industry certification articulates with academic degrees.





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What Bridge Models Exist?

- I-BEST
- Carreras en Salud
- Digital Bridge Academy
- FastStart@CCD
- Bridge to Biotech



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Integrated-Basic Education and Skills Training (I-BEST)

“initiatives like the I-BEST program in Washington state that combines basic and career skills classes to ensure that students not only complete college, but are competitive in the workforce from the moment they graduate.”

President Barak Obama
CQ Transcripts Wire
Speech on Higher Education
April 24, 2009

- Based on WA Tipping Point Research.
- Bridge into Certificate or Degree programs.
- Equal overlap in instructional time required to qualify for 1.75 FTE Reimbursement.

(content and basic skills must be presented for at least 50% of classroom time)



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Carreras en Salud (Careers in Health)

- Bilingual CNA (Certified Nurses Assistant) and LPN (Licensed Practical Nurse) training program.
 - Registered Nurse Program in the works.
- Targets Spanish Speaking GED or HS Graduates in Chicago Area.
- Program has 7 levels, each to be completed in 16 weeks.
 - Students can test into higher levels.
- Graduates have doubled their salaries, average salary of \$40K.





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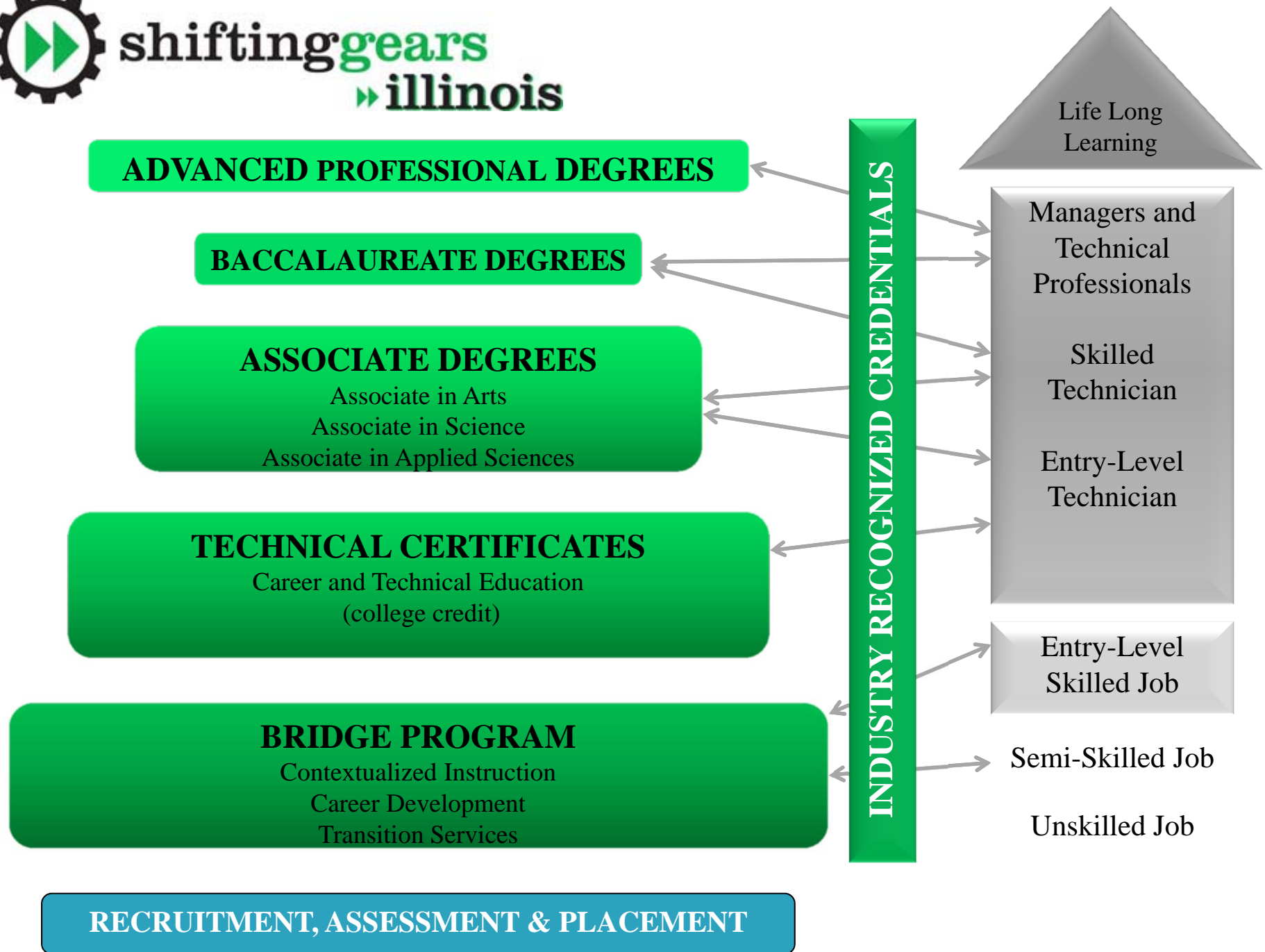
Shifting Gears (Ivy Tech, IN)

- Initially launched by the [Joyce Foundation](#) as a state policy change in the Midwest states.
- Goal is to improve post secondary options for lower skilled and working adults.
- Automotive course that embeds developmental math in collaboration with the math faculty.





shiftinggears
» **illinois**





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FastStart at Community College of Denver

- Based on data through the Jobs For the Future grant.
- Bridge Math, Reading and English skills of students to college levels of these courses.
- Learning communities that integrate career exploration and educational planning.

*“An affordable vibrant
education
in a diverse urban
environment”*



FastStart Data

Key Outcomes	FastStart Group (n=60)	Comparison Group (n=115)
Completed 1+ Levels of DevEd Math with Passing Grade (%)	86.7	78.3
Passed All DevEd Math/College Ready in Math (%)	71.7	49.6
Credits of DevEd Math Passed (average)	6.21	5.53
College Credits Earned at 24 Months After Entry	14.5	12.6
Passed College Math Gatekeeper Course (%)	35.0	23.5
Still Enrolled 24 Months After Entry (%)	28.3	14.8
Graduated with Certificate (%)	0	1.7
Graduated with 2-year Degree (%)	1.7	0
GPA	2.68	2.28



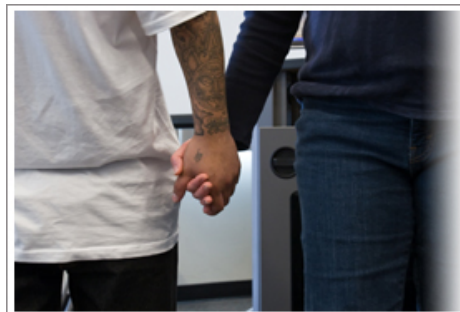
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Academy of College Excellence (formerly Digital Bridge Academy)

- Semester long bridge program to degrees or certificates.
- Begins with a 2-week Foundation course on learning styles and communication skills.
- Hands on and interactive exercises with all of the same group of students.
- Instructors integrate assignments.

Intensive bridge program that uses social justice curriculum to engage high-risk students in the learning process through an analysis of meaningful social issues.

www.my-ace.org/change-webinar



A Transformative Education
For The Digital Age



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Bridge to Biotech (B2B) Program at City College of San Francisco

Entryway for students without any scientific background

General entryway to the Biotechnology Degree courses for students with some scientific background

Biotechnology Laboratory Assistant Certificate

General Biology and Chemistry Courses

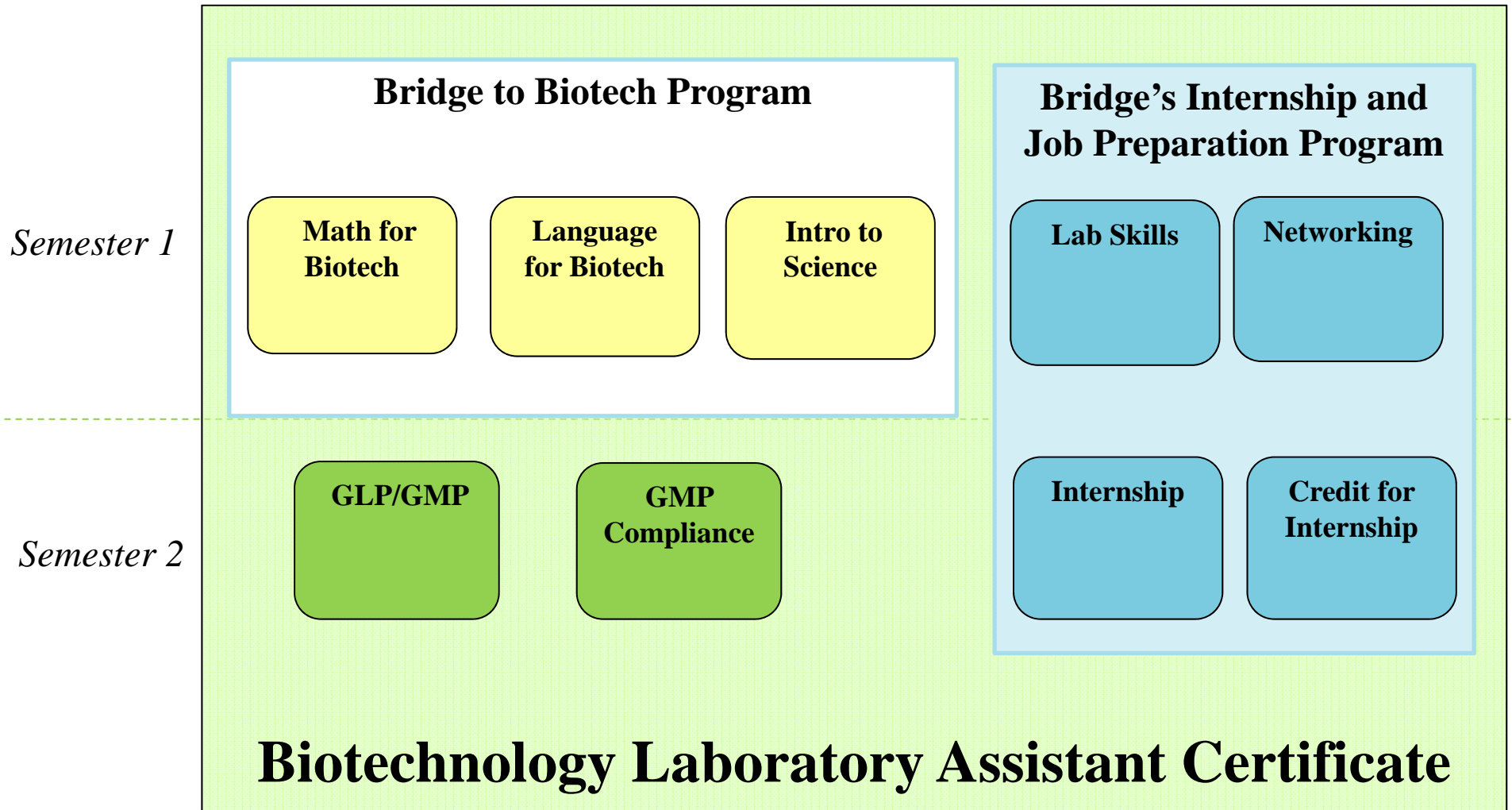
Biotechnology Certificates
(Biomanufacturing, Biotechnician, Stem Cells,
Genomics Technology, Bioprocess Instrumentation and Control)

AS Degree in Biotechnology
or
Biomedical Equipment Technician (BET)



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Bridge to Biotech (B2B) Program at City College of San Francisco





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Biotech Program Impact Data

- **Retention:** 82%
- **Persistence:** 83% of those who pass persist beyond Bridge, take twice as many units and stay in school three times longer.
- **Completion:** Bridge graduates complete twice as many biotech certificates.
- **Hiring:** 40% of interns are hired by mentors after internships.



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Biotech Program Impact Data

- General success gateway courses: 77% pass, while 50% of non-Bridge students fail.
- Twice as many African American Bridge students persist, compared to African American Non-Bridge students.
- Twice as many Filipino and Latino Bridge students pass.





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Contextualized Teaching and Learning

A Major Motivator

Establish learning communities and linked courses.
Examples of contextualization:

- Students learn math that aids them in that week's biology class.
- Students learn job search skills in language class using content from biology class.





Contextualized Teaching and Learning

Research

Students in contextual Math compared to standard Math.

- 327% more likely to pass contextual course.
- 387% more likely to pass degree applicable coursework in the same semester.
- 400% more likely to pass transfer-level course in the same semester.
- 167% more likely to pass degree applicable coursework in the subsequent semester.



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Internship Program

Another Major Motivator

- Students complete a second semester internship (180 hours, unpaid) as part of the program.
- Between the years of 2007-2009, 50 interns were placed.
 - 80% of all bridge participants.
- 40% of these were hired as employees. Many of who were not hired, did so to return to school.

Internships with
UCSF, Prosetta Bioconformatics, USDA, Gilead Sciences





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Benefits of Internships

1. Increased motivation; career clarity.
2. Enhanced employability.
3. Vocational maturity.
4. Ability to engage a formerly inaccessible network.
5. Increased interest in getting more education.

[Video] Kiel Copeland discusses the benefits of internships:

<http://www.bio-link.org/home/videos/kiel-copeland>



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What Do Students Say About It?

http://www.youtube.com/watch?v=1Ka_aiHKlqg



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Is It Scalable?

- Yes...But it's a challenge.
- NSF wants to scale successful ATE programs– But how?
- NSF grant to Bio-Link and other ATE Centers has tried to answer the “But how?”.





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Is It Scalable?

- Scaling the Bridge to Biotech:
 - Early successes (5 adopting colleges in June 2011, with 5 more to be added in June 2012).
- Adaptation is key! But letting adaptation happen can be hard.
- Toolkit and virtual learning community lessons.



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Challenges

- Funding
- Recruitment Sources:
 - Counselors
 - EDD
 - Fliers
 - “Gateway failers”
 - Posters
 - Facebook
 - CBO’s

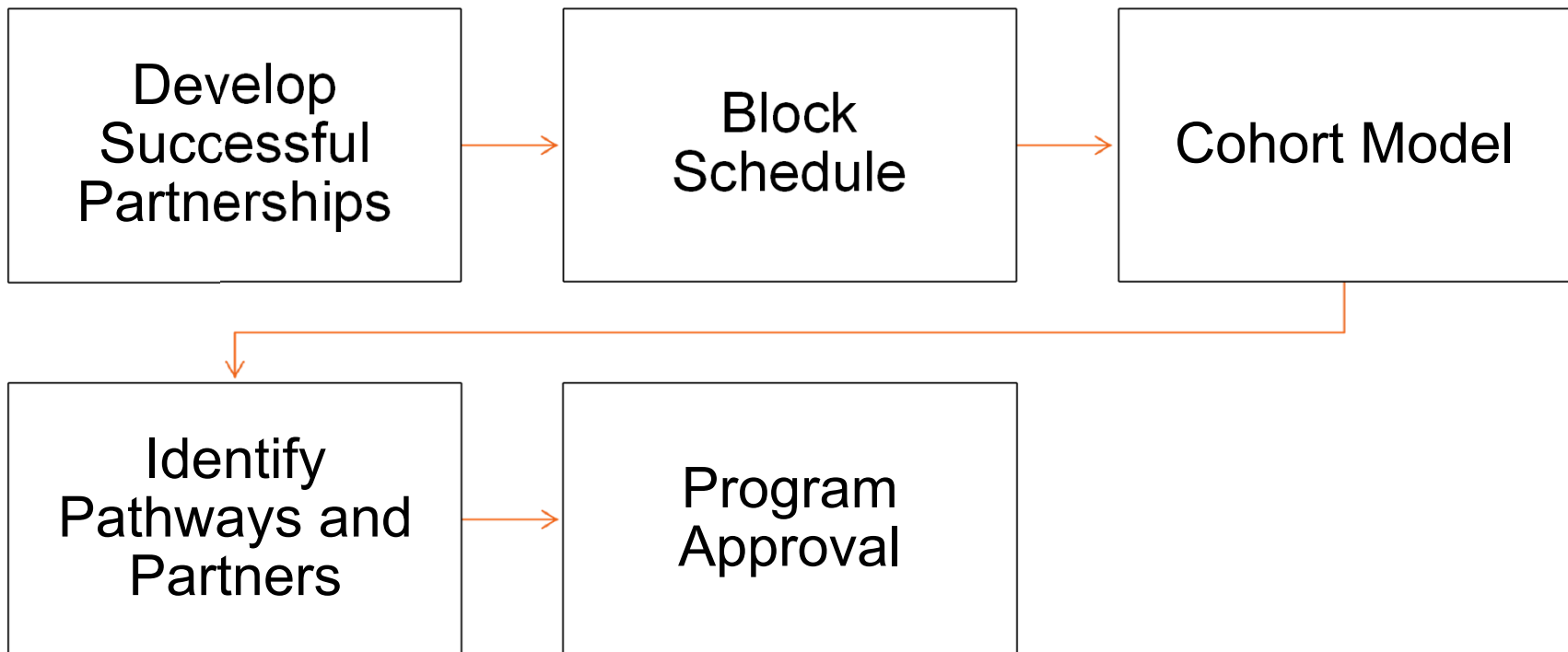


No Golden Source



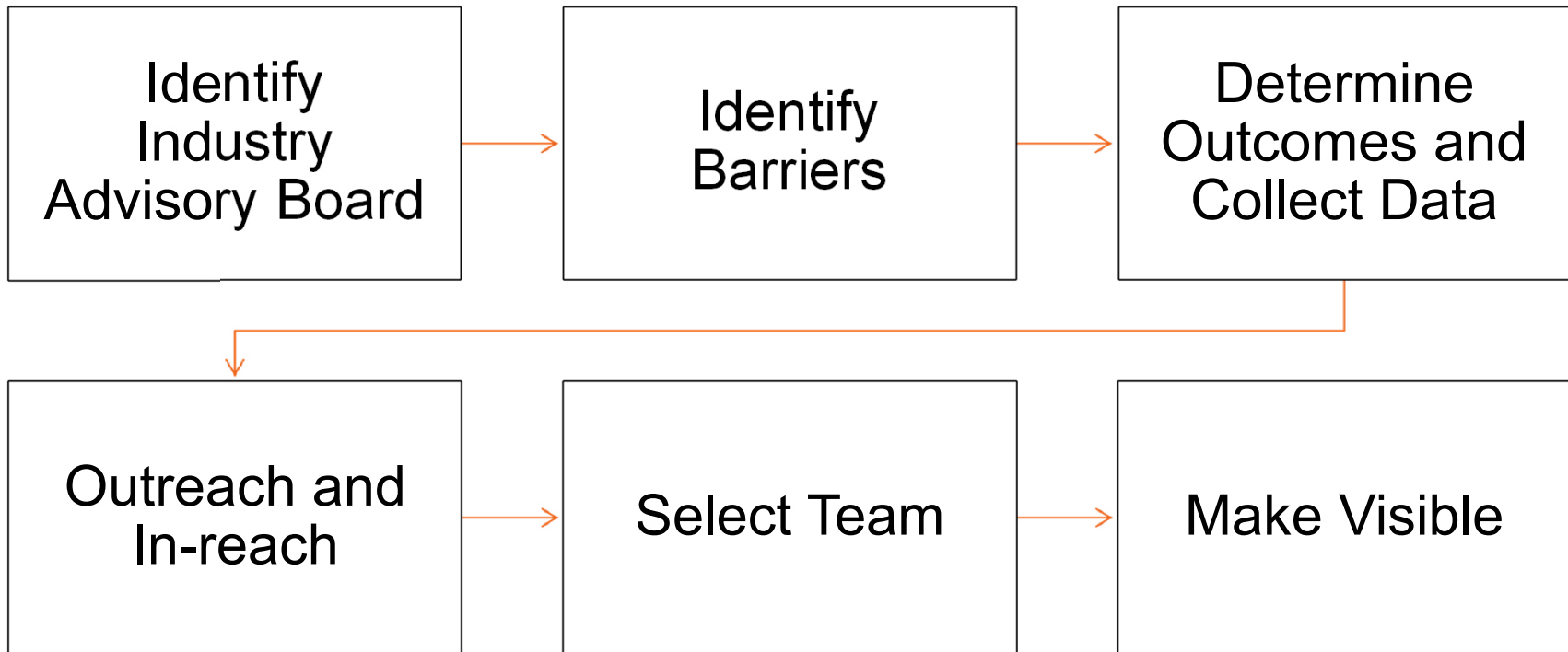


How Do I Create A Program? P1





How Do I Create A Program? P2





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What Resources Exist?

- Women Employed
- How to Build Bridge Programs that Fit into a Careers Pathway-Carreras En Salud.
- CTL (Contextualized Teaching and Learning) Primer
- Career Ladders Project
- Bio-Link Toolkit
- JFF (Jobs For The Future)





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Review of Objectives

Objective 1: Goals For College Completion
And Job Market

Objective 2: How Bridge Models Address
Barriers To These Goals

Objective 3: Bridge Programs

Objective 4: Challenges





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Whether you are joining us live or watching the recorded version of this webinar, please take 1 minute to provide your feedback and suggestions.

<http://questionpro.com/t/ABkVkZLIdR>



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Webinar Resources

To access the recording and slides, visit

www.matecnetworks.org,

Keyword Search:

“Webinar Bridge to Technology”



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Upcoming Webinars

Currently working on the upcoming
2012-2013 webinars.

If you would like to see any past webinars
please visit:

www.matecnetworks.org/growth.php



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JULY 23-26, 2012

www.highimpact-tec.org



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Thank You!

Thank you for attending the
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