



# BPC Plans: Goals & Activities

[tinyurl.com/BPCAct](http://tinyurl.com/BPCAct)



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# BPC Plans: Goals & Activities

1. Brief Introduction - One Highlight from Harvey Mudd
2. Colleen's Summary of the White Paper
3. Resources for Developing BPC Goals and Activities

# HARVEY MUDD COLLEGE



**Welcome Class of 2022!**

Harvey Mudd's incoming students are a ta

# Tips for Department Inclusivity



CS Teaching Tips.org/Tips-for-Department-Inclusivity



## 1 Survey students regularly

to identify institution-specific growth opportunities.

We want to improve our department based upon your feedback!



## 2 Optimize the intro course

to be welcoming regardless of CS exposure.

You don't need prior CS experience to succeed!



## 3 Monitor performance patterns

to identify structures or culture with differential impact.

We should investigate why some groups have higher rates of attrition!



## 4 Support new pedagogies

to improve students' learning and experience.

Teachers are encouraged to adopt effective teaching practices!



## 5 Train faculty to respond to bias

to address toxic culture in and out of the classroom.

We are all responsible for creating a positive dept. culture!



## 6 Foster student community

to create effective peer mentoring programs.

Funding for snacks can be helpful for building community!



## 7 Show students the breadth of CS

to engage beginning students with varied interests.

CS is a broad field with connections to many other disciplines!

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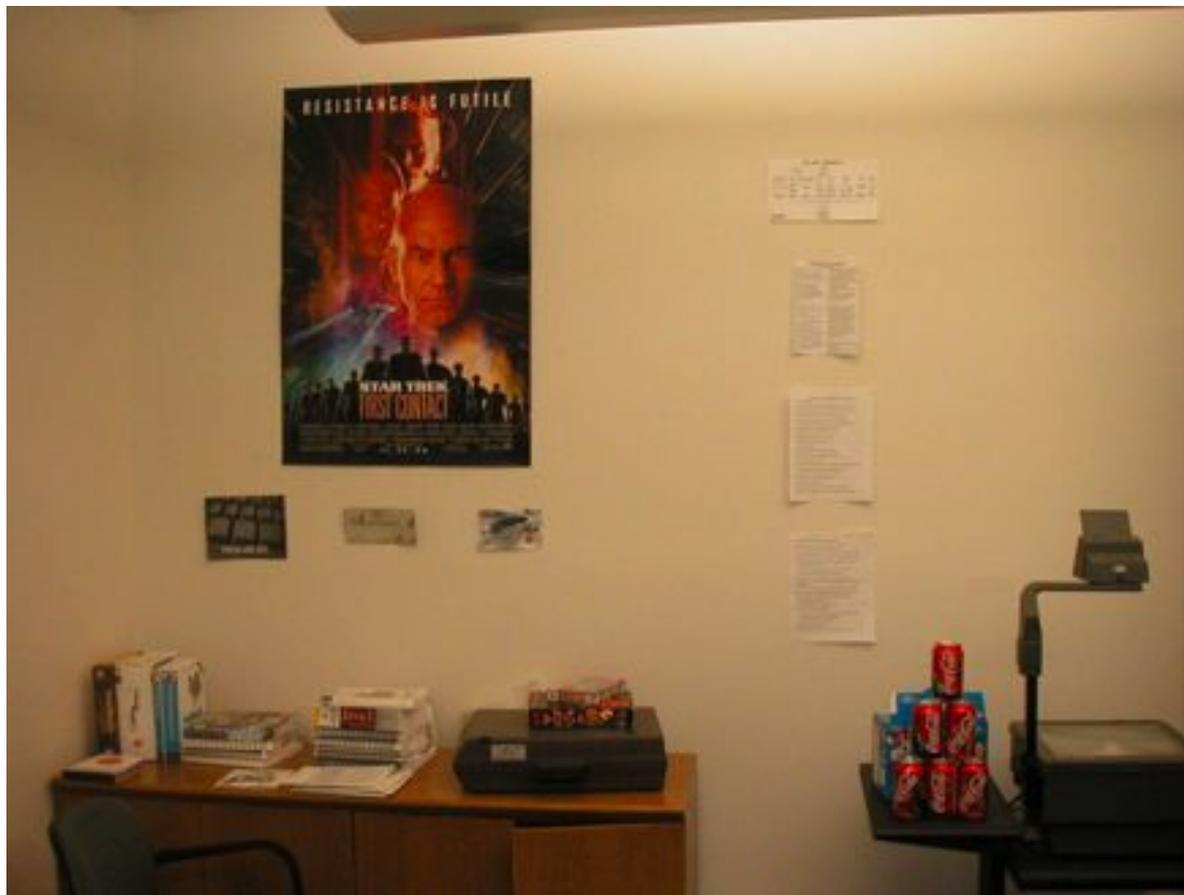


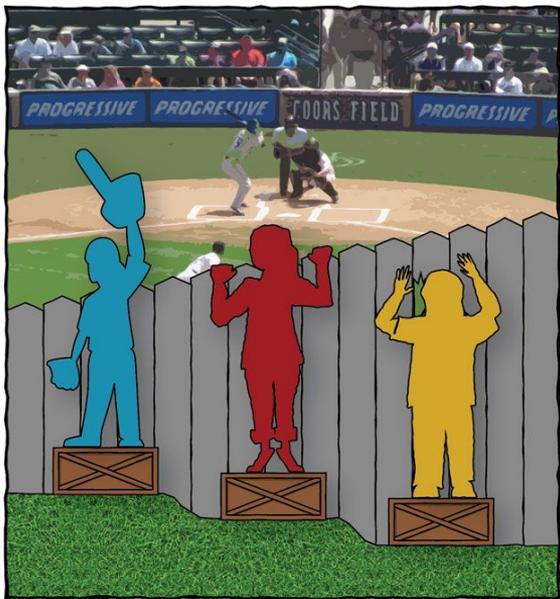






Prof. Sapna  
Cheryan  
UW Seattle

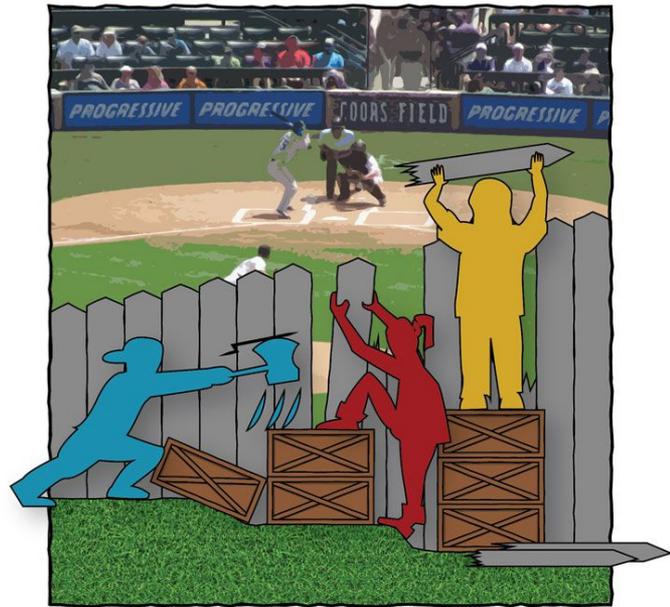




**EQUALITY**



**EQUITY**



**JUSTICE**

# Colleen's Summary of the BPC Plan White Paper

# Colleen's Key Takeaways

[www.nsf.gov/cise/bpc/White\\_Paper.pdf](http://www.nsf.gov/cise/bpc/White_Paper.pdf)

- **You have a lot of flexibility**

- “A range of activities will be acceptable, and PIs should choose activities based on their own level of BPC experience, as well as the contexts of their institutions, departments, and research groups.”

- **You don't need to invent anything**

- “PIs could, for example, work within department plans or they could join existing, successful programs with a BPC focus at the national or regional level”

- **You don't need to integrate BPC with CS research**

- “The activities of the BPC plan do not have to relate to the research described in the full proposal. Nor do they need to be novel.”

- **You don't need to write much**

- “The departmental plan should be limited to 1-2 pages. PIs using the departmental BPC plan are expected to develop one additional page that details their own goals and activities and how they connect to the departmental plan.”

# Context - Individual Plans

[www.nsf.gov/cise/bpc/White\\_Paper.pdf](http://www.nsf.gov/cise/bpc/White_Paper.pdf)

- **Do:** Identify a specific goal for your BPC activities
- **Do:** Provide baseline data for eventually measuring success
- **Don't:** Attempt to serve “all” underrepresented students

# Strategy - Individual Plans

[www.nsf.gov/cise/bpc/White\\_Paper.pdf](http://www.nsf.gov/cise/bpc/White_Paper.pdf)

- **Do:** Identify the scope of work, timeline, and roles
- **Do:** Provide specifics of previous work and partnerships
- **Do:** Build upon specific existing BPC practices
- **Do:** Engage in longer-term activities or short-term activities that have an achievable short-term outcome
- **Don't:** Provide a list of disconnected BPC activities
- **Don't:** Include everything you do

# Target - Individual Plans

[www.nsf.gov/cise/bpc/White\\_Paper.pdf](http://www.nsf.gov/cise/bpc/White_Paper.pdf)

- **Do:** Provide specific and measurable participation goals
- **Do:** Demonstrate an understanding of structural causes of underrepresentation for your intended population
- **Do:** Co-design activities with the people you hope to serve with your plan or activities
- **Don't:** Blame or attempt to "fix" students

# Measurement and Dissemination Individual Plans

[www.nsf.gov/cise/bpc/White\\_Paper.pdf](http://www.nsf.gov/cise/bpc/White_Paper.pdf)

- **Do:** Collect data to iteratively improve plans and activities
- **Do:** Specify plans for disseminating lessons learned
- **Don't:** Assume that all plans will work as intended and won't need continual refinement

# Resources



**[BPCnet.org](http://BPCnet.org)**

A group of students in a classroom are using VR headsets. One student in the center is wearing a blue VR headset and gesturing with their hands. Other students around him are also wearing VR headsets. In the background, there is a chalkboard with mathematical equations and diagrams. The scene is dimly lit, with a blue and green color overlay.

# Departmental Activities

These resources are designed to simplify departments' BPC efforts by assisting departments in establishing a plan that fits and engages in impactful projects.

[VIEW](#)



# Partnering Activities

These resources are designed to increase NSF PI understanding of, interest in, and ability to engage with existing activities designed to support BPC at All levels.

[VIEW](#)

## Getting Started

## Evolving

## Impactful

### Context

#### Action to level up

#### Action to level up

Problem and goal are described

Clearly describe the problem you seek to serve with your initiative; identify the target population and how the intervention will serve their unique needs

Problem and goal are aligned with needs of target population; some awareness of BPC issues

Identify BPC data that informs effort and that can help to identify population and its needs

Problem and goal aligned with needs and strengths of target population and informed by evidence and prior BPC work

### Strategy

Describes one or more BPC activities that PI will engage in

Connect well-defined activities to a goal; explain the PI's role

Connects BPC activities to a goal; explains PI's role in activities

Add a clear work plan with timeline and personnel, and build on evidence-based BPC approaches

Cohesive set of well-described BPC activities connected to goals and needs; activities are realistic and achievable; builds on evidence-based approaches and BPC resources

### Resources

Lists potential partners, tools, and resources

Identify how partners, tools, and resources will be leveraged to inform and support needs of identified population

Describes plan for engaging with partners and use of tools and resources to support activities

Build knowledge of evidence-based BPC tools and resources and establish partnerships to inform and support their use

Describes local and national resources that will be leveraged; has established relationships; includes support for student participation

### Target

Identifies underrepresented population

Utilize local and national data to make informed decisions about population to serve; consider relevant demographics for the target population in all aspects of BPC plan; selection of activities is informed by data

Describes identified underrepresented population demonstrating understanding of cultural competency and cultural relevance in plan and intended impact

Identify strengths and needs of target population, describe resources that will be leveraged; if applicable, provide evidence of authentic partnerships and collaborations

Underrepresented population is authentically involved in the strategies identified in the plan, including planning, activities and dissemination

### Measurement & Dissemination

Tracks already-collected data for department or institution about the target group

Develop an iterative process to strengthen efforts over time; share results within institution

Describes measurement plan to collect data at specific time point(s)

Use validated assessment instruments with cultural validity and reliability; build dissemination plan reaching BPC community

Has data on current BPC status; measurement plan and metrics are aligned with goals; system for using the results to inform strategies; dissemination plan to reach target population and BPC community

**national center for**

**women**

**&**

**INFORMATION  
TECHNOLOGY**

**NCWIT.org**

# tinyurl.com/ncwitActivities

[tinyurl.com/ncwitActivities](https://tinyurl.com/ncwitActivities)

## **Extension Services for Undergraduate Programs Activity Reference Sheet**

### **Increase Enrollment**

- Participate in events held by admissions or other campus offices (e.g., give presentations at orientation)
- Develop and deliver messaging that will inform potential majors about career opportunities and the nature of computing and engineering work
- Have students or faculty act as ambassadors for the major at admissions events (e.g., orientation)
- "Market" your major to undeclared majors
- Create a strategic recruiting plan that targets qualified and readily available potential students
- Offer a minor
- "Market" your minor to students with other majors
- Provide relevant and accurate information (e.g., "Talking Points") to the admissions, advising, and other offices that might speak on your behalf
- Have faculty inform and personally recruit capable students in non-major introductory courses
- Develop an appealing web site and brochures for diverse prospective students
- Print and distribute posters about your program
- Provide information to K12 teachers, guidance counselors, etc.
- Have students conduct "roadshows" in high schools (and have local current undergrads recruit from

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to create effective peer mentoring programs.

Funding for snacks can be helpful for building community!



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to engage beginning students with varied interests.

CS is a broad field with connections to many other disciplines!

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What would you say if... Your colleague says

“Women  
just don’t like CS.”

[csteachingtips.org/cards](https://csteachingtips.org/cards)

# Handouts

# tinyurl.com/newitActivities

# CSTeachingTips.org

# BPCnet.org

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## Tips for Reducing Bias

CSTeachingTips.org/Tips-for-Reducing-Bias

- 1. Make your expectations explicit** to avoid tacit assumptions within your class.
  - Start homework early so you have time to get help.
- 2. Grade anonymously** to mitigate the effect of unconscious bias.
  - Don't list your name in the homework.
- 3. Establish clear policies** to ensure students are held to the same standards.
  - Students receive a 30-day extension.
- 4. Learn students' names** to enable you to engage all students equally.
  - That's a great question.....!
- 5. Acknowledge & manage your bias** to mitigate and monitor the impact of your biases.
  - Am I spending more time with particular students?
- 6. Teach students about bias** to educate your students and show you care.
  - Everyone has unconscious (sometimes conscious) biases!
- 7. Listen to students' experiences** to learn how you can create a supportive environment.
  - What in your course makes you feel like you're being?

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## Tips for Lecturing

CSTeachingTips.org/Tips-for-Lecturing

- 1. Integrate active learning** to increase students' learning and engagement.
  - Discuss the question with your partner.
- 2. Motivate lecture content** to help students understand the relevance.
  - The skill is needed to solve systems like
- 3. Make learning goals explicit** to help students identify the important ideas.
  - At the end of lecture you should be able to:
- 4. Encourage questions** to have a chance to clarify unclear content.
  - What was unclear? What questions do you have?
- 5. Require students to self-assess** to help students identify what they understand.
  - Can I explain the concept to my partner in my own words?
- 6. Ask students for feedback** to adapt to their needs & show that you care.
  - Thumbs up or down - did this make sense?
- 7. Explain your pedagogical moves** to help students understand your teaching strategies.
  - This pairing of questions is designed to help students identify their own content.

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  - We should improve our department based upon your feedback.
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  - You don't need prior CS experience to succeed!
- 3. Monitor performance patterns** to identify structures or culture with differential impact.
  - We should investigate why some groups have higher success rates than others.
- 4. Support new pedagogies** to improve students' learning and experience.
  - Teachers are encouraged to experiment with teaching methods.
- 5. Train faculty to respond to bias** to address toxic culture in and out of the classroom.
  - We are all responsible for creating a positive environment.
- 6. Foster student community** to create effective peer mentoring programs.
  - Reaching for excellence in CS is a team effort.
- 7. Show students the breadth of CS** to engage beginning students with varied interests.
  - CS is a broad field with many other disciplines.

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## Tips for Encouraging Help Seeking

CSTeachingTips.org/Tips-for-Encouraging-Help-Seeking

- 1. Remind students about resources** to set the expectations that everyone will need help.
  - Help should come to the office hours, not the other way around.
- 2. Embrace your mistakes** to show that everyone makes mistakes.
  - Thanks for catching my mistake!
- 3. Hold help sessions in public places** to reduce power differentials and encourage attendance.
  - I hope you'll attend office hours in the common area, not the classroom.
- 4. Structure collaboration** to help all students develop a peer network.
  - You'll work with your student partner in class today.
- 5. Introduce the growth mindset** to help students reflect on their learning process.
  - You might be afraid to make mistakes, but you should embrace them.
- 6. Use Piazza for Q&A** to provide an anonymous Q&A forum.
  - You can always post your questions on Piazza.
- 7. Email students with low grades** to communicate your care and believe they can learn.
  - I noticed you had a low grade on this assignment.

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*Details departmental goals and activities that contribute to **advancing the goals** of the project plan. Goals may focus on **systemic change or** specific improvement in the **recruitment, retention, or advancement** of underrepresented populations, with focus on:*

- **Faculty and staff** (e.g., advising staff, instructional faculty, tenure-track faculty, research staff and faculty, administration);
- **Students** (e.g., undergraduate or graduate, within or beyond your department);
- **Institution or Profession** (e.g., college, university, professional organizations); and
- **Community** (e.g., K-12 schools, community colleges, adult/continuing education, workforce training).

*Goals should be **specific and measurable**. Activities that contribute to the goal should build on **evidence-based** approaches for BPC, leverage existing resources, and build on or result in partnerships with organizations.*