

Microaggressions are subtle, mundane exchanges that communicate hostile, derogatory, or negative messages to individuals based on group membership.^{1,2} They can be verbal, behavioural, or environmental,¹ and include staring, glaring, comments, actions, and gestures.

These actions are not always conscious, yet are constant - often daily - experiences for people of colour, women, LGBTQ+ communities, people with disabilities, and members of other under-represented groups.²⁴

Why Does This Matter for STEM Professions?

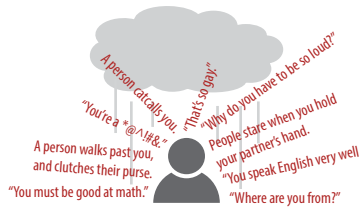
Microaggressions are prevalent across social environments; they exist in media coverage²⁵, clinical therapy²⁶, classrooms²¹, academia³, workplaces²⁷, and communities¹⁹. They are powerful because of the subtle, negative messages they often send¹, including that the person does not belong, and they deviate from the accepted norms. These messages are often unconscious and unintentional.

In order to address the lack of diversity in STEM fields, individuals and organizations must acknowledge their unconscious biases and behaviours. Microaggressions are interpersonal and institutional²⁸; they can be as simple as unintentionally excluding a person from an important conversation²⁷.

Education and reflection - individually, communally, and institutionally - are critical steps to making workplace and community environments inclusive to all people, regardless of the groups they identify with. Once identified, action is needed to correct policies and behaviours that have the potential to harm and discriminate against members of our communities.

Prevalence & Effects

College students of colour experienced an average of **291 microaggressions** over 90 days.³



Microaggressions:

Negatively impact mental health. ⁴⁻⁹	Decrease productivity & problem-solving abilities. ^{10,12,13}
Perpetuate stereotype threat. ^{10,11}	Create hostile work & institutional environments. ^{14,15}

What Can We Do?

To address microaggressions, learn to:^{2,22}

Define them
especially "invisible" ones

Recognize them
In ourselves, and others

Deconstruct their hidden meanings

Acknowledge their effects
& learn about coping strategies

Take action^{23,25}
Implement education programs

Types of Microaggressions²

Microassaults² (often conscious)

Aims to **attack the a person's group identity**, or harm them through **name-calling, avoidance, and discriminatory actions.**^{16,17}

Occurs when the perpetrator:¹⁸

has a level of anonymity

is among like-minded people

loses control

Microinsults² (often unconscious)

Conveys a **stereotype, rudeness, or insensitivity** towards a person's group identity.



Includes assumptions about the individual's:²

sexuality^{19,20} citizenship¹ language abilities²¹
belonging¹ intelligence¹ gender²² criminality¹

Microinvalidations² (often unconscious)

Denies, excludes, & negates the **experiences and feelings** of an individual in a group.



May lead individuals to **question their experience.** Their response to the negative interaction may be **perceived as a irrational overreaction.**²



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Recommended Readings

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About WVEST

Westcoast Women in Engineering, Science & Technology 2010-2015 (WVEST) is the operating name for the NSERC Chair for Women in Science and Engineering (CWSE), BC and Yukon Region. Our mission is to advance engineering and science as welcoming careers that serve our world through holistic understanding and creative, appropriate and sustainable solutions. WVEST works locally and, in conjunction with the other CWSE Chairs, nationally on policy, research, advocacy, facilitation, and pilot programs that support women in science and engineering.

About the Chairholder

The 2010-2015 Chair was held by Dr. Elizabeth Croft, P.Eng., FEC, FASME. Dr. Croft is the Associate Dean, Education and Professional Development in the Faculty of Applied Science, and a Professor of Mechanical Engineering at the University of British Columbia. She is also the Director of the Collaborative Advanced Robotics and Intelligent Systems (CARIS) Laboratory. Her research investigates how robotic systems can behave, and be perceived to behave, in a safe, predictable, and helpful manner. She is the lead investigator of "Engendering Engineering Success," a 3-year interdisciplinary research project that aims to take an evidence-based approach to increasing the retention of women in engineering by understanding and changing aspects of workplace culture that place women at a disadvantage.

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