

Intentionally Educating for the Social Good in Computer Science



COMPUTER SCIENCE

REGIS UNIVERSITY

**COLLEGE OF COMPUTER AND
INFORMATION SCIENCES**

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Outline



- Problem
- Background
- Approach
- Summary
- Questions

Problem



- “Global social inequity and environmental degradation are increasing.
Computer science education is not consistently or sufficiently using its ability to make a large positive social impact on these problems” (CSG-ED, 2019).
- Failure to recognize that computing professionals should:
“Contribute to society and to human well-being, acknowledging that all people are stakeholders in computing” (ACM, 2018).

Background



- 1995: Ethics for Information Technology Professionals
- 2010: ABET
- 2014: Ethical Leadership in Computer Science
(Urman, J. and Blumenthal, R., 2018).
- 2018: ACM Code of Ethics and Professional Conduct
- 2019: Center for Common Good Computing
“Transform the IT workforce to enable a more just and ethical world.”

Hierarchy of Computing Impact on the Social Common Good



(Maslow, 1943)

Actualization of
Full Potential

Promote Positive Impact

Avoid Negative Impact on Society

Deficiency
Needs

“Create opportunities...”

Avoiding negative impact doesn't entail a positive impact!

General Pedagogical Approach



Throughout the curriculum students are:

- Exposed to guiding and aspirational responsibilities
- Required to practice behaviors that intentionally support/promote the common good
- Encouraged to Ethical Thinking:
 - * Identify all impacted stakeholders,
 - * Predict negative and positive consequences,
 - * Analyze impacts and consequences (theory),
 - * Make ethically informed decisions (project).

Ethical Leadership in Computer Science



- **“Traditional” Course Level Pedagogical Approaches**
 - Current Events, Case Studies, Ethical Theories, Discussions
- **“Novel Approach”**
 - World problem focus
 - Leadership focus
 - “Situated-Action”, Practice (skill)

Summary



- Proactively promote the common social good (i.e. aspirational, in addition to guiding, behaviors)
- Activity practice behaviors that promote the common social good
- Situate students in problems of their own choosing

Questions



- Questions?



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