PLTL: UW-Milwaukee

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• #2 PhD-granting school in UW System
• 28,000 students
• Small, dense, urban campus
• Admission standards are not high
• Many non-traditional students
• at least 11% minority students
  – high for Wisconsin
Department

- Computer Science (part of EECS)
  - In College of Engineering
  - 400 declared majors (over all years)
  - 6% women, 12% minority
  - Most students work half-time or more
The CS1 Course

• First course in 3 course sequence
• Language: C++
  – C with C++ I/O system
• ~200 students in two lectures
  – Two one-hour lectures per week
  – One two-hour laboratory section
• Required for CompSci majors and several engineering majors
PLTL Course

• “Introductory Topics in Computer Science: Wisc. Emerging Scholars”
  – One two-hour section per week
  – 1 credit
  – Graded on attendance
  – 4 sections
  – 2 student leaders, each with 2 sections
  – Weekly one-hour instructors’ meeting
Recruitment

- Phone recruitment
  - Women and minority students in CS1
  - Yielded 4 registrations
- In-class recruitment
  - Yielded 24 total registrations
  - 1 woman, 6 minority
PLTL Activities

• Most exercises taken from Duke and UW-Madison materials
  – Adapted to C++ and sometimes rewritten
  – Less focus on logic problem solving
  – Followed topics of CS1 course

• 3 practice exams
What worked?

• Excellent peer leaders (can attract excellence and promote it)
• Ice breakers are remarkably valuable
• PLTL process is resilient
  – Some activities work, some don’t
    • don’t worry
  – Can always fall back on course material
• The “Robots” exercise is great!
What didn’t work? (1)

• Recruitment is hard at Milwaukee
  – Small engineering college
    • Recruitment of L&S majors is taboo
  – Face-to-face recruitment seems impossible
  – Student body has few women in STEM majors
Challenges

- Survey response level was poor
  - Mistake to rely on TAs for CS1 course
- WES students did no better than others
  - Perhaps they were needier students
- Some problems early with acceptance of exercises that were not closely linked to course
Observations

• Team leaders differ greatly in style
  – Focus, pace, intellectual strengths
  – Not a problem, but must use their strengths

• PLTL cannot replace our regular lab sections without a course redesign
  – Our labs have programming exercises and quizzes