

# Peer-Led Team Learning

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Depts of Chem, Math, and Physics, Cornerstone, and The  
Teaching Center



# Outline

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- Frey
  - Peer-led team-learning (PLTL) model
  - Peer leaders at Washington University
- Hockings
  - General Chemistry I and II
- Woods
  - General Physics I and II
- Kuehne
  - Calculus I and II

# What is Peer-Led Team Learning (PLTL )?

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- PLTL model
  - Formalized study groups containing 6-8 students facilitated by a student (peer) leader
  - Supplements the lecture; not a replacement for the lecture
  - Close interaction between peer leaders and the instructors of the class
- Purposes of PLTL model are to:
  - Teach undergraduates how to effectively use group study
  - Improve students' problem-solving skills
  - Provide facilitated help for students
  - Provide an active-learning environment for students
- Based on the national Workshop Chemistry Project – now called the PLTL Project.
  - The initial consortium of schools was from the Northeastern US and Chicago
  - URL: <http://pltl.org>

# What is Peer-Led Team Learning (PLTL )?

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- Weekly, students work together, in groups, for two hours on challenging problems and concepts
  - Problems are designed to be solved cooperatively
  - Different problem-solving methods are used to encourage group interaction
- Student leaders facilitate the group work
  - They do not show how to work the problems
  - Big stumbling block for most participants
- No answer key is given for the PLTL problems
  - Bigger stumbling block for most participants
- Study-group students must sign a contract:
  - ⊕ No more than 2 excused absences
  - ⊕ Must attempt homework problems before session
  - ⊕ Be willing to study cooperatively in a group
  - ⊕ Participate in new activities with an open mind
  - ⊕ Must take part in evaluation surveys

# Philosophy of PLTL Model

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- In a group, students learn how to problem solve and think critically
  - Methods used are discussed
  - Students gain confidence to solve more complex problems
- There is no answer key
  - Group must decide if the answer is correct or not
  - Increases student's ability to apply understanding
  - Essential aspect to perform well on quizzes and exams, as well as in any careers
- The model gives a structure for students to:
  - Create their own community of scholars
  - Become independent learners
  - Take responsibility for their own learning

# Peer Leaders at Washington University

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- Peer-leader qualifications
  - Participated in a PLTL study group previously
  - Received an A/A- in the course
- Application process
  - Application form
  - Recommendation letter
  - Group interview with instructors and current peer leaders
- Responsibilities
  - Weekly meetings (PAM course)
  - First-time training (SAM course)
  - Weekly PLTL sessions
  - Maintain familiarity with course material
- Excellent educational and leadership experience for the leaders

# Peer Leader - PAM

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- Peer leaders meet weekly for two hours
  - 2-credit general-studies course (PAM)
  - Taught by instructor who runs the PLTL program in the discipline
- Goal: prepare peer leaders for each week's PLTL session
- Work problems in groups with peer leaders taking turns facilitating
- Assignments:
  - Write reflections about week's problem set and the group's reaction to the set
  - Observing another leader's PLTL session
  - Participating in the interviews for new peer leaders
- PLTL leaders are observed by the instructor of the course throughout the semester

# First-time Peer Leaders - Training

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- Semester-long 1-credit course (SAM)
  - Required first semester of peer leading
  - Taught by the Teaching Center
- Course is multi-disciplinary
  - Calculus, chemistry, and physics
- Goals:
  - Learn how to develop group dynamics
  - Learn facilitation skills
  - Develop leadership skills
  - Develop listening and communication skills
- Topics include:
  - Peer-leader role, group dynamics, encouraging participation, questioning strategies, learning styles, diversity, and listening skills
- Requirements:
  - Eight 2-page papers (reflections)
  - One group book project
  - Class participation



# Peer Leaders - Benefits

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- Promotes confidence in solving problems on exams
- Focuses on effective study skills
- Hones communication and leadership skills
- Refreshes and maintains learning for future applications (MCAT, GRE)
- Understand different learning styles
  - Creates ideas on tackling problems differently
  - Brings new dimensions to problems
- Obtain insight to diverse group dynamics

For more information about PLTL,  
visit our PLTL websites.

**General:**

<http://artsci.wustl.edu/~teachcen/pltl>

**Mathematics:**

<http://www.math.wustl.edu/~lisak/pltl.html>