NEEDS: 1) Increased participation in STEM classes (and careers) by majority and under-represented students
2) Mechanisms to increase student engagement and participation in STEM classes

APPROACH:
• Focus on community college faculty
• 6 week summer research program – research match based on interests more than background
• Weekly collaborative curriculum development seminar

BENEFITS:
• Increased student engagement in course material
• Increased understanding and appreciation of Engineering & Technology by community college science and math to transmit to students
• Curriculum elements that are solutions to problems not solutions in search of problems

OUTCOMES:
• Summer curriculum seminar key to translating research into relevant curriculum elements
• Biology and Mathematics community college faculty found useful links with engineering
• Diverse and very creative curriculum elements

DELIVERABLES:
• Curriculum elements
• Evaluation of impact of curriculum elements
• Within network sharing via implementation workshops and monthly on-line meetings

Example: Dr. Vedham Karpakakunjaram, Montgomery College; Principles of Biology I
• Summer research: Insect flight digitization and animation combined with modeling
• Curriculum element: Group puzzle exercise with computer generated stereolithographic scale models of animal, plant and bacterial cells