Henry Ford Community College’s Virtual Theatricality Lab offers a 12 credit course sequence that teaches the skill sets required for the film and animation industry standard of Motion Capture Systems Technician. The certificate was developed in cooperation with Dan Lemieux, Hollywood stunt coordinator and Motion Capture performer.

The certificate sequence is taught using a Vicon Optical Motion Capture System, Blade and Motion Builder Software. These are the same tools used to create Motion Capture Characters in The Polar Express, Beowulf, and A Christmas Carol, among hundreds of others.

The first required course, Maya, Art 209 gives students the fundamental knowledge of 3D art and graphics necessary to the understanding and mastery of a Motion Capture pipeline. The second course in the sequence, STH 262, introduces students to the elements of Motion Capture. The third course in the sequence, STH 263, gives students experience in facial Motion Capture. The final course, STH 264, culminates in a Motion Capture project showcasing acquired skills in a demo reel.

Dr. George Popovich
Director and Founder, Virtual Theatricality Lab
Alan Contino, Chief Engineer
Gary Glaser, Adjunct Teaching Faculty
Dan Lemieux, Artist in Residence (http://www.imdb.com/name/nm1195301) (Motion Capture Physical Performance)

Adjunct Non-Teaching Faculty
Edwin Bawal
Michael Cochran
Lisa Dubicki
Alan Contino

HFCC Virtual Theatricality Lab Web Site: http://vtl.hfcc.edu
Info Via Phone: 313-845-6478
Info Via Email: popovich@hfcc.edu
Virtual Theatricality integrates traditional stagecraft with virtual characters, scenery and props for live theatre production. Henry Ford Community College’s Virtual Theatricality Lab is a dynamic, risk-taking institute that combines artistic and technological disciplines in a pace-setting program to redefine the nature of live theatrical performance. The Virtual Theatricality Lab has established itself as a cutting-edge leader with the development of a revitalizing curriculum that unites the disciplines of computer science, art, music, theatre, dance, film, and video. The VTL is dedicated to forging the live performance technologies of the 21st century and beyond. In 1994 virtual reality and 3D stereo were utilized as multimedia teaching aids in HFCC Theatre Arts classes. After experimenting with processes and techniques for approximately four years, the Virtual Theatricality Lab began production of William Shakespeare’s The Tempest. The Tempest (2003) used 3D stereoscopic projection and real-time VR navigated scenery to give new life and meaning to Shakespeare’s classic and make it accessible to a new generation. The VTL is a dynamic, forward-thinking program that unites the disciplines of computer science, art, music, theatre, dance, film, and video. The VTL is dedicated to forging the live performance technologies of the 21st century and beyond.

The Virtual Theatricality Lab (VTL) is a dynamic, risk-taking institute that combines artistic and technological disciplines in a pace-setting program to redefine the nature of live theatrical performance. The VTL has established itself as a cutting-edge leader with the development of a revitalizing curriculum that unites the disciplines of computer science, art, music, theatre, dance, film, and video. The VTL is dedicated to forging the live performance technologies of the 21st century and beyond. In 1994 virtual reality and 3D stereo were utilized as multimedia teaching aids in HFCC Theatre Arts classes. After experimenting with processes and techniques for approximately four years, the VTL began production of William Shakespeare’s The Tempest. The Tempest (2003) used 3D stereoscopic projection and real-time VR navigated scenery to give new life and meaning to Shakespeare’s classic and make it accessible to a new generation.

A survey of fantastic cinema with an emphasis on the visual effects and techniques used to create the spectacular common to these films.}

**STH 262 Introduction To Motion Capture**
Performance and Motion Capture Production for use in Virtual Theatricality, Motion Pictures, Gaming, Television, and Motion Studies. This course provides an introduction to the motion capture pipeline from setting up the lab and capturing data to applying the data to animated characters in Motion Builder. This introductory class will be limited body capture to only.

**STH 263 Intermediate Motion Capture**
Prerequisite: STH 262
A lab-based computer class dealing with the principles of Motion Capture Performance and Motion Capture Production for use in Virtual Theatricality, Motion Pictures, Gaming, Television, and Motion Capture Studies. This course provides an intermediate bridge to the final class in the Motion Capture Systems Technician Certificate sequence. This course will focus on cleaning and editing data, hand capture, and facial capture.

**STH 264 Advanced Motion Capture Application**
Prerequisite: STH 262
A lab-based computer class dealing with the principles of Motion Capture Performance and Motion Capture Production for use in Virtual Theatricality, Motion Pictures, Gaming, and Motion Studies. This course is the final class in the Henry Ford Community College Motion Capture course sequence.

**STH 266 Greenscreen Visual Effects for Stage and Screen**
A lab-based class dealing with the principles of compositing and greenscreen application for use in Virtual Theatricality, Motion Pictures, Gaming, Television, and Web Media.

**STH 267 Stereoscopic Cinematography for Stage and Screen**
A course designed to enable students to comprehend the historical and practical aspects of 3D stereo cinematography for stage and screen.

**STH 269 Cinematographic Special Effects for Stage and Screen**
A course designed to introduce actors to film acting techniques. Focus is on the techniques of Sanford Meisner.

**Film Acting I**
A course designed to introduce students to the major types of CGI special effects utilized in motion pictures, video, and stage.

A survey of fantastic cinema with an emphasis on the visual effects and techniques used to create the spectacular common to these films.

**STH 262 Introduction To Motion Capture**
Performance and Motion Capture Production for use in Virtual Theatricality, Motion Pictures, Gaming, Television, and Motion Studies. This course provides an introduction to the motion capture pipeline from setting up the lab and capturing data to applying the data to animated characters in Motion Builder. This introductory class will be limited body capture to only.

**STH 263 Intermediate Motion Capture**
Prerequisite: STH 262
A lab-based computer class dealing with the principles of Motion Capture Performance and Motion Capture Production for use in Virtual Theatricality, Motion Pictures, Gaming, Television, and Motion Capture Studies. This course provides an intermediate bridge to the final class in the Motion Capture Systems Technician Certificate sequence. This course will focus on cleaning and editing data, hand capture, and facial capture.

**STH 264 Advanced Motion Capture Application**
Prerequisite: STH 262
A lab-based computer class dealing with the principles of Motion Capture Performance and Motion Capture Production for use in Virtual Theatricality, Motion Pictures, Gaming, and Motion Studies. This course is the final class in the Henry Ford Community College Motion Capture course sequence.

**STH 266 Greenscreen Visual Effects for Stage and Screen**
A lab-based class dealing with the principles of compositing and greenscreen application for use in Virtual Theatricality, Motion Pictures, Gaming, Television, and Web Media.

**STH 267 Stereoscopic Cinematography for Stage and Screen**
A course designed to enable students to comprehend the historical and practical aspects of 3D stereo cinematography for stage and screen.

**STH 269 Cinematographic Special Effects for Stage and Screen**
A course designed to introduce actors to film acting techniques. Focus is on the techniques of Sanford Meisner.

**Film Acting I**
A course designed to introduce students to the major types of CGI special effects utilized in motion pictures, video, and stage.