

GenericCurve3

```
<<friend>> LinearCombination3: class
<<friend>> TensorProductSurface3: class
# _usage_flag: GLenum
# _vbo_derivative: RowMatrix<GLuint>
# _derivative: Matrix<Cartesian3>

+ GenericCurve3(maximum_order_of_derivatives: GLint = 2, point_count: GLint = 0,
                 usage_flag: GLenum = GL_STATIC_DRAW)
+ GenericCurve3(curve: const GenericCurve3&)
+ operator =(rhs: GenericCurve3&): GenericCurve3&
+ deleteVertexBufferObjects(): GLvoid
+ <<const>> renderDerivatives(program: const ShaderProgram&, order: GLint, render_mode: GLenum): GLboolean
+ <<const>> renderDerivatives(order: GLint, render_mode: GLenum,
                             vec3_position_location: GLint = 0): GLboolean
+ updateVertexBufferObjects(usage_flag: GLenum = GL_STATIC_DRAW)
+ <<const>> mapDerivatives(order: GLint, access_mode: GLenum = GL_READ_ONLY): GLfloat*
+ <<const>> unmapDerivatives(order: GLint): GLboolean
+ <<const>> operator ()(order: GLint, index: GLint): const Cartesian3&
+ operator ()(order: GLint, index: GLint): Cartesian3&
+ setDerivative(order: GLint, index: GLint, d: const Cartesian3&): GLboolean
+ setDerivative(order: GLint, index: GLint, x: GLdouble, y: GLdouble, z: GLdouble = 0.0): GLboolean
+ <<const>> derivative(order: GLint, index: GLint, d: Cartesian3&): GLboolean
+ <<const>> derivative(order: GLint, index: GLint, x: GLdouble&, y: GLdouble&, z: GLdouble&): GLboolean
+ <<const>> maximumOrderOfDerivatives(): GLint
+ <<const>> pointCount(): GLint
+ <<const>> usageFlag: GLenum
+ <<const>> generateMatlabCodeForRendering(
    file_name: const std::string&,
    mode: std::ios_base::openmode = std::ios_base::out | std::ios_base::app,
    line_color: const Color4& = colors::blue,
    line_style: const std::string& = "'", line_width: const GLdouble& = 1.0,
    x_coordinate_name: const std::string& = "x",
    y_coordinate_name: const std::string& = "y",
    z_coordinate_name: const std::string& = "z"): GLboolean
+ <<const>> clone(): GenericCurve3*
+ ~GenericCurve3()
<<friend>> operator <<(lhs: std::ostream&, rhs: const GenericCurve3&): std::ostream&
```