Master Course Syllabus

Department: Engineering Technology  Course Prefix/Number: IT 461
Official Course Title: Computer-Aided Visualization.
Master Syllabus Approved by Department on: __01__ / __30__ / __09__

I. Catalog Description:
The principles of computer-aided visualization and simulation as they relate to mechanical design and assemblies. Software tools will be used to analyze parametric parts and assemblies for strength, function, range of motion and interference. Photorealistic animation and images will also be produced to simulate realistic lighting, texture, and colors. Lab fee $10.

II. Prerequisites: IT 235 or approval of instructor.

III. Expanded Course Description
This course will focus on computer-aided visualization and simulation as they relate to mechanical design and assemblies. Software tools will be used to analyze parametric parts and assemblies for strength, function, range of motion and interference. Photorealistic animation and images will also be produced to simulate realistic lighting, texture, and colors. This course will focus on topics such as range of motion, interference, deflection, strength of materials, mechanical failure, and robust design methods.

IV. Intended Student Learning Outcomes: Upon completion of the course, students will be able to:

1. Model small mechanisms that are fully defined and constrained
2. Apply physical constraints that simulate static and dynamic joints
3. Apply loads to the models to simulate use/movement
4. Use meters to monitor, position, velocity, stress, deformation and vibration
5. Modify designs to solve identified problems.

V. Unless otherwise stipulated in this master syllabus by the department, the following items are subject to faculty discretion as described in each faculty member’s individual course outline/syllabus:

a) Course Requirements? (grading/evaluation procedures; class attendance policy; term papers, projects, field assignments; examinations; class participation, etc.)

b) Required Text(s)?

b) Bibliography?

VI. Academic Honesty: Cheating, plagiarism (submitting another person’s materials or ideas as one’s own), or doing work for another person who will receive academic
credit are all-impermissible. This includes the use of unauthorized books, notebooks, or other sources in order to secure or give help during an examination, the unauthorized copying of examinations, assignments, reports, or term papers, or the presentation of unacknowledged material as if it were the student’s own work. Disciplinary action may be taken beyond the academic discipline administered by the faculty member who teaches the course in which the cheating took place.

VII. Students With Disabilities Policy: It is the policy of Tarleton State University to comply with the Americans with Disabilities Act (ADA) and other federal, state, and local laws relative to the provision of disability services. Students with disabilities attending Tarleton State University may contact the Office of Disability Services at (254) 968-9478 to request appropriate accommodation. Furthermore, formal accommodation requests cannot be made until the student has been officially admitted to Tarleton State University.

Department Head Signature/Date:

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Signature                        Date