Department of Computer Science and Engineering Semester: 7th

- **Course Code:** CSE 540205
- **Course Title:** Computer Graphics and Multimedia
- Section: All
- **Instructor's Information:**
 - Name: Md. Imtiaz Ahmed
 - Designation: Lecturer, CSE
 - Office Location: 5^h Floor, Lazz Pharma Building
 - Cell phone No.: 01717430880
 - Class Code of the Course on Google Classroom: yzvfmp2
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Academic Integrity:

Daffodil Institute of IT is committed to the highest standards of academic excellence, integrity and honesty under National University of Bangladesh. Students are expected to abide by these standards regarding academic honesty and to uphold the policies of the University in this respect and avoid any behavior which could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offense. Academic dishonesty is a serious offense and can result in suspension or expulsion from the Institute.

Course Objectives:

This course will develop student's knowledge of

- > Be very familiar with a collection of Computer Graphics algorithms.
- > Be intimately familiar with mathematics for Computer Graphics.
- > Be able to apply techniques in practical problems.
- > The importance of Computer graphics and how it works with the computer.
- > How Animation created and what is the steps to make animation.
- Graphics algorithms for visualization like DDA, Bresenham Line, Circle, Midpoint Circle, Midpoint ellipse, etc.
- > Two dimensional and three-dimensional transformation.

- > Clipping techniques and clipping algorithms.
- Monitor devices and how monitor devices visualize the computer pictorial view or representation.

Course Contents:

- > Computer graphics elaboration and why it is needed.
- > Image representation and Halftoning.
- Scan Conversion- DDA, Bresenham line, Bresenham Circle, Midpoint Circle, Midpoint ellipse.
- > Two dimensional transformation- Geometric and coordinate transformation.
- Two dimensional viewing and clipping, window to view port, polygon, line clipping, clipping algorithms.
- > Three dimensional transformation- Geometric and coordinate transformation .
- > Mathematics of Projection, perspective and parallel projection.
- > Hidden Surfaces- Z-buffer algorithms, The painter's algorithms.
- Multimedia types and Multimedia uses.
- > Midi techniques and image compression.
- > Multimedia teleconferencing, Multimedia rules of transferring.

Figure 3 Text and Reference Books:

- **1.** Roy A. Plastock and Gordon Kalley, Schaum's Outline of Theory and Problems of Computer Graphics, published by McGraw-Hill, 2nd Edition.
- 2. Foley and VanDam, Computer Graphics Principles and Practice, Published by Pearson, 2nd Edition.
- **3.** Schaum's Outline series, Computer graphics.
- 4. Steven and Harrington, Computer graphics: a programming approach.

Midterm & Final Exam:

Midterm & Final examination will be conducted as per the schedule declared by the department.

Academic Dishonesty Policy:

Each student will be expected to do his/her own work on tests and assignments. If a student is found to be cheating (or helping someone else to cheat) on a test or any assignment, he/she will receive a grade of zero for that assignment or test.

Special Instructions:

- > All students are encouraged to attend all the classes on time.
- > There will be 3 (three) unannounced class tests and all of them will be counted.
- > There will be no make-up for the class tests.

-----Best of Luck with this Semester-----