## Department of Computer Systems Engineering UNIVERSITY OF ENGINEERING & TECHNOLOGY, PESHAWAR



## **Digital Image Processing**

## **TERM PROJECT**

Total Marks: 5 % Absolute Demo + Report Due: 31/12/19

Instructor: Dr. Aftab Khan

- Do not copy or cheat in any way from your classmates or anyone else.
- No material to be utilized from the internet. Not for referencing even.
- Plagiarism is strictly discouraged and FINED.
- Submission and demo will be in class. Do not upload assignments or projects to the subject group.

## **Objective:**

1. To demonstrate your ability in constructing an image processing algorithm for a complex real life problem.

Your goal is to read the retinal fundus image, generate the mask of the Region of Interest (ROI), extract the vessels, locate the center of the optic disk (put a cross on the center when located) and trace around the boundary of the optic disk.

- Utilize your image processing skills.
- The project is individual work.
- Code in Matlab.
- 40 images are provided. Test your system on all of them.
- No cheating or copying of code in any manner. There will be a harsh penalty.
- Submission along with demo presentation will be in class.
- Submit report on your findings and tabulate your results to see how accurate you were.
- Don't think you can cheat in any manner. The goal is to gain knowledge and skills.
- No late submission whatsoever. Early submission is encouraged.
- PROJECT VIVA WILL BE HELD ALONG WITH CODE DEMONSTRATION.

1.	The original fundus image
2.	Mask generated from the fundus image
3.	Vessel segmentation
4.	Localization of the optic disk center
5.	Boundary estimation of the optic disk