PLAN OF WORK AND METHODOLOGY

4.1 Selection of CCD Camera and suitable lens:

Based on the information obtained from the literature review, the type of CCD camera, the lens required for the application, lighting selection and mounting, camera mounting distance from the object i.e. mirror will be selected for the experimentation.

4.2 Design of Mechanical Arrangement:

Based on the information obtained from the literature review, the mechanical arrangement of camera mounting, lighting arrangement, enclosure for the two experiment set ups (one for Distortion Factor & Radius of curvature and second for Reflectance) will be designed.

4.3 Selection of the remaining hardware:

Once the selection of the CCD camera from section 4.1 has been done, a compatible frame grabbed card and a desktop PC with suitable configuration will be selected and procured.

4.4 Development of Algorithms for the measurement of Distortion Factor:

Based on the information obtained from the standards about the measurement process of Distortion factor, a proper process of measurement process will be decided and an algorithm will be developed to implement that process in the software.

4.5 Development of Algorithms for the measurement of Radius of Curvature:

Based on the information obtained from the standards about the measurement process of Radius of Curvature, a proper process of measurement process will be decided and an algorithm will be developed to implement that process in the software.

4.6 Development of Algorithms for the measurement of Reflectance:

Based on the information obtained from the standards about the measurement process of Reflectance, a proper process of measurement process will be decided and an algorithm
will be developed to implement that process in the software.

4.7 Development of Software for Image Grabbing, Storage, display and General User Interface (GUI):

Based on the camera selection and the frame grabber card selection, a device driver software will be written to interface the selected hardware and a common integrated software program will be written.

4.8 Software Testing and Integration:

The developed software routines will be tested in the experimental set up created and it will be tested for different types of rear view mirrors.

4.9 Analysis of the results and conclusion:

The results obtained from the experiments will be analyzed and based on the analysis a formal conclusion will be made and will be submitted as a report.