GAA DIAMOND GRADING CERTIFICATE

PRACTICAL SYLLABUS.

1. LOUPE

1.1 Revise and check loupe technique for each student.

2. MICROSCOPE

2.1 Introduce microscope, go through setting up procedures, make sure that all students are familiar with correct adjustment for each individual's visual capabilities.

3. DIAMOND IMITANTS.

3.1 Visual identification of diamond vs cubic zirconia
3.2 Set and unset diamonds and c.z's.

4. WEIGHT ESTIMATION

4.1 Use of weight estimation formulae for round brilliant cut diamonds and adjustment to formulae to allow for variations from ideal. (i.e. hidden weight in lumpy top, thick girdle etc)
4.2 Check estimation of weights against actual weights of the stones.

4.3 Use of weight estimation formulae for fancy shaped diamonds.
- 4.3.1 Oval,
- 4.3.1 Heart shaped,
- 4.3.3 Emerald cut,
- 4.3.4 Marquise cut,
- 4.3.5 Pear shaped,
- 4.3.6 Princess cut,
- 4.3.7 Trilliant,
- 4.3.8 Tapered baguette,
- 4.3.9 Old European brilliant,
- 4.3.10 Old mine cut.

5. CLARITY.

5.1 Plotting of inclusions and imperfections,
5.2 Relating plots to the clarity of the stone,
5.3 Assigning clarity grade.
5.4 CIBJO, GIA, and SCAN D.N. systems (similarities and differences)

6. COLOUR.

6.1 Use of colour masters to determine colour of diamonds.
6.2 CIBJO and GIA systems (position of masters, similarities and differences)
6.3 Colour grading of set diamonds (introductory)

7. CUT (MAKE).

7.1 Use and principles of the proportionscope
7.2 Visual estimation of proportions,
7.3 Estimation of pavilion depth and table size by observation of the facets and reflections in the diamond.
7.4 Relating these observations to the overall stone and fine tuning the weight estimation exercise.
7.5 Visit cutting factory (if possible)

8. SYMMETRY AND FINISH CONSIDERATIONS.

8.1 Major symmetry considerations in a round brilliant cut diamond
8.2 Minor symmetry considerations in a round brilliant cut diamond.
8.3 As above for fancy shaped diamonds.

8.4 Finish considerations in both round and fancy shaped diamonds.

9. RECUTS AND SALVAGE.

9.1 Estimate weight retention in recutting an:

9.1.1 Old mine cut to a modern round brilliant cut
9.1.2 Old European brilliant cut to a modern round brilliant cut (Both deep and shallow stones)

9.2 Estimate weight retention in repairing a damaged diamond which:

9.2.1 has a chipped girdle,
9.2.2 has a chipped culet.

10. TREATMENTS.

10.1 Recognition of :

10.1.1 Fracture filled diamonds
10.1.2 Lasered diamonds
10.1.3 Irradiated fancy coloured diamonds (only if stock with visible spectra is available)
10.1.4 Natural blue (type IIb) diamonds using an electrical or audio circuit (only if stock is available)

11. GENERAL.

There should be an emphasis of loupe work as opposed to microscope work as the course progresses so that a student should be able to perform all the tasks that are done with the equipment available to them by observation with a loupe or the naked eye.