# Selection of Homework Questions

## Topic 2: Morphological Classification

**(1) History :** Using the references/links given in Topic 2.3, write a brief (1-2 page) history of galaxy classification covering the period 1850 - 2010. Include a bibliography.

**(2) Classification :** Read deVaucouleurs' article in Handbuch der Physik [ o-link ] so that you become familiar with his classification scheme (you can skip the introduction; frequency of types; pairs and multiples; frequency of revised types and the Quantitative Morphology (paper copy only)).

This [link] takes you to 14 galaxy images for you to classify on the deVaucouleurs scheme. Be as complete as you can be, but no more. For each galaxy, write a brief justification of your assigned type. (A .doc file of the images can also be found here: [link]).

**(3) Luminosity Classes :** Go to the RSA (either the hardcopy or web version : [o-link]) and read section V so that you become familiar with van den Bergh's Luminosity Classes (I - V). If you can, assign luminosity classes to the galaxies in question (2).

**(4) Automated Classification :** Use the Web to search for information on "Automated Galaxy Classification". Write a brief (1 page) summary of the current status of this subfield in astronomy. Include a bibliography.

**(5) Hubble Sequence :** What properties (morphological and non-morphological) vary **systematically** along the Spiral Hubble sequence (T = 0 to 10, exclude ellipticals and S0s). For each of these, discuss briefly how the parameter changes and what physical processes account for these changes.

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