ACCESS TO DATA, THE STATISTICS RAW MATERIAL: 
A DIDACTIC PROPOSAL FOR UNDERGRADUATES (ADMINISTRATION AND 
economy of small and medium sized companies)

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We present a didactic proposal that includes the access to data bases and their subsequent 
statistical analysis, to be implemented in an undergraduate technical curriculum in Administration 
and Economy of Small and Medium Sized Companies in the year 2006. This program intends to 
prepare graduates (technicians) that acquire, among other skills, the ability to tend the 
management level of an organization by means of generating information for decision making. 
Based on this, it is necessary to include within the curriculum, contents related to the 
administration and research of databases, and the process and development of reports that support 
the decision-making level of an organization.

At the end of the course, the student will be able to: (a) describe the way in which the 
information of an organization is managed in a database administration system; (b) acquire 
practical skills in the creation of databases, their tables, queries, forms and reports; (c) process 
data using spreadsheets and specific statistical packages; (d) critically evaluate the resulting 
information; (e) use technological tools to best communicate and solve the problems presented; 
and (f) stimulate cooperative work and individual responsibility to achieve a common objective.

In order to reach the mentioned objectives, we propose that theoretical and practical 
contents should be approached in such a way as to enable the students to understand the 
importance of the information systems in organizations, and the handling of the specific tools.

The contents studied are: organization of data in databases; definition of database 
administration systems and their components, the relational model and SQL (Structures Query 
Language). We develop practical activities for the creation of queries that are exported in text 
delimited format for their later processing using any software.

To solve the practical activities, the Faculty Web site, from where the e-learning platform 
can be accessed, will be used. Then, using a Web interface, students can query with SQL different 
databases that are stored in ‘My SQL.’ There are enterprise, socio-economical and demographic 
databases available. This diversity lets the students use different tools and carry out an analysis 
from different perspectives, arriving at different conclusions.

The main tool for students to reach the proposed objectives is a written didactic material, 
“Introduction to the SQL.” It was developed by educators of the faculty of the Computer and 
Technology Information Center, who are specialists in the contents, for the exclusive use by this 
course. This material is the tool in which the presentation of the contents is supported and 
responds directly to the objectives that we wish to achieve.

The evaluation will be done in the classes that taught the course. The instructor will 
investigate the difficulties in the learning process and its possible causes. The last type of 
evaluation will be a final examination that will take place in the computer lab through which we 
will test the students’ fulfillment of the general objectives of the course by individually solving a 
practical activity on a PC in the presence of an educator, in a limited period of time.