



ANALYTICAL CONSULTING LAB SYLLABUS

Background on the Analytical Consulting Lab

The Analytical Consulting Lab (ACL) is part of the Kellogg experiential learning pillar. The specific interest in the Analytical Consulting Lab comes out of the deep demand for business leaders that can provide guidance in analysis and focus that analysis to specific business questions. Additionally, many recruiters and employers have commented that finding talent that bridges the business and analytical communities is difficult. The ACL strives to provide a real-world learning experience for students to work with sponsoring companies on business questions that revolve around analysis. Students work in teams using analysis (broadly defined) to answer current and important business questions.

Kellogg has a strong tradition in bringing analysis to bear on business questions. In fact, the Analytical Consulting Major is the second most popular major at Kellogg, suggesting that not only does the ACL support this major, but it will resonate strongly with the goals of many a Kellogg MBA student.

Course Details

The ACL is offered as DECS-915 in the winter term. Specifics on the available projects can be found at:

<http://www.kellogg.northwestern.edu/faculty/walker/htm/acl/>

Most projects in the ACL are being sponsored by Kellogg alumni at very senior levels in their organization. Students taking the ACL are assured a strong learning experience and a commitment from the firm to provide access to decision maker and information that will make the experience meaningful.

Course Details in the Course List:

<http://www20.kellogg.northwestern.edu/dpco/offdtl.asp?coursecatalogid=1343>

Course Meetings

As with other experiential courses, the focus is on the team project and its delivery to the sponsoring company.

Teams will meet with the Professor on a regularly and frequent basis in order to discuss the analysis, flow of work, final presentation and delivery to the sponsoring team. The class will not meet in the traditional sense.

Group Presentation

An important aspect of the experiential learning program is for students to learn from each other's experiences. Additionally, students are expected to present the results of their work in a presentation format to the client. With these goals in mind, the class will convene for group presentations. In this session all groups (subject to any NDAs) will present to the entire ACL class. In this, students are expected to comment on other projects, providing ideas and feedback. Additionally, this is to provide each team an opportunity to practice the delivery of their presentation in front of a live audience. Participation is mandatory.

Grading

Grading of the project is driven largely by the quality of the team project. The Professor will evaluate the project, its analysis, presentation, and delivery on the following major points:

- Analysis:
 - Quality of analysis (thoroughness, appropriateness)
 - Clarity and quality of model summary and description
 - Intellectual impact (was the analysis creative, novel, clever, or otherwise compelling?)
- Project Document
 - Quality of project description
 - Quality of analysis summary
 - Quality of recommendations and conclusions
 - Use of meaningful graphs, graphs, and presentation of data
- Presentation Documents
 - Quality of presentation
 - Professional impact of the presentation
 - Ability to communicate main points of the analysis and recommendations
- Team Meetings
 - Preparation
 - Organization
 - Progress

The Professor will ask the client company to provide feedback on the same above points.

Peer evaluations will also be collected from each member. Each student must rate their teammates on the following dimensions:

- Intellectual and creative contribution
- Workload and willingness to take initiative

- Organization, preparation, and availability
- Collaboration and respect for peers

Peer evaluations will be on a 1-10 scale with 10 being excellent and 1 being poor. All peer evaluations will be treated confidentially.

Additionally, the group presentation (before final project delivery) will count towards the grade. All ACL students must participate, as participation is also important to make this a meaningful learning experience for all involved.

Grade Breakdown

Professor Evaluation of project materials and presentation:	35%
Client Evaluation of project materials and presentation:	35%
Peer Evaluations:	20%
Pre-delivery, in-class group presentation and participation:	10%

Role of the Professor

The Professor serves as an aide, counselor, and advisor for the team. The Professor does not conduct the analysis, but will provide detailed direction on analytical approaches. The Professor does not serve as the team liaison or representative to the client. The team must organize itself and identify such a liaison. The Professor may accompany the team to select team meetings and or participate in calls, but the Professor cannot in practically, attend all such meetings.

In the event that the client or the ACL student team encounter an incompatibility or encountered an issue, the Professor will intervene to remedy the situation.

The Professor may also resolve project assignments, as needed.

Role of the Team

The team will consist of 3-5 Kellogg MBA students working as a team to complete analysis, as defined by the client as agreed to before the start of the academic term.

The team should be mindful to control the amount of time that is required of the client. This means being prepared for meetings, having a designated liaison to schedule meetings, request information, and follow-through with next steps. This level of preparation and understanding is needed as most clients sponsor this project but do not allocate a full-time associate to work with the ACL team.

The team should expect to contribute about 400-500 hours over the 10-week period to this ACL project. This is a reasonable expectation for a team working on a project and is consistent with other experiential and lab courses at Kellogg.

Role of the Client

The client provides the real-world learning opportunity, data needed to complete the appropriate analysis, and feedback on the quality of the project and its analysis. The Client is not expect to solve the problem, but should provide ample expertise, data, and contextual information to the ACL team.

Pre-requisites

All students in the ACL must have completed DECS 433 and 434 (or equivalents). Additionally, each student must have completed an additional analytical course that is appropriate for the project of interest. This may include analytical courses in marketing, operations, economics, decision sciences, or finance. Your enrollment and selection of the project is subject to the approval of the Professor, based on courses taken and general performance in analytical courses.

Some FAQs:**What is the Analytical Consulting Lab?**

It is a course available to Kellogg MBA students that are interested in the use of analytics in business. Students must take specific perquisites and have strong academic performance in such classes to take the Analytical Consulting Lab. Students work in teams to resolve a real-work business problem using analytics.

What do you mean by Analytics?

It is meant to be broad but includes the use of specific quantitative approaches, such as regression analysis, time series analysis, forecasting, market segmentation, data mining, optimization, logistical analysis, scenario simulation, and risk analysis, as examples. In particular, we mean solving a business problem using data and applying one of these quantitative approaches.

How does this experience benefit the students?

Kellogg MBA students taking the ACL will work on a real-world problem under the direction of a Kellogg faculty member. The opportunity to apply analytical theory and learn about a business, make recommendations, and bring together many aspects of their business education is unparalleled. We also ask that the students focus on how to communicate the results of analysis in the context of business decision-making. For students interested in moving to an industry to deep in analytics after graduation or developing new business skills in analytics, this course will be very attractive.

The Analytical Consulting Major is one of the most popular majors at Kellogg and students have expressed deep interest in developing strong skills in analytics. This course meets an interest in our students and provides them an experiential learning opportunity that will prepare them for business opportunities.

How does my organization benefit from this opportunity?

The ACL is an intensive analytics elective that attracts some of our most analytically talented MBA students. It is expected that the student group will commit about 400 working hours to the

project. Additionally, the student project will be overseen by a Kellogg faculty member that has expertise in analytics and its application in business.

We expect that the project deliverables, recommendations, and report will provide direct value to your organization. However, we also believe that the project provides your organization and opportunity to determine how and where to invest in more analytics. If this includes the acquisition of more analytical talent, the project provides an excellent conduit to members of our student body that are talented and interested in this space.

How does the team work with my organization?

For the student team, the partnering company is a client. They will conduct their analysis and provide recommendations through a report and presentation in the same format and in the same manner as a consulting service. The faculty member also serves as an important liaison between the partner and the student, serving to manage time commitments and negotiate deliverables. It is expected that the student team can meet with and speak with key members of your team that can help them answer questions relevant to the analysis.

What about the data?

To make this experience valuable to the students and the to solve the business problem at hand, we do need access to data. It is important that the data be available before the project begins. Additionally, the project should make use of “scrubbed” data, that is data that is free of specific information that would be sensitive or otherwise governed by a law, such as social security numbers of customers or names of customers.

What types of business problems can be considered?

As analytics is helpful in many business functions, we are open to many applications of analytics. Specific business problems in marketing, forecasting, customer segmentation, pricing, commodity analysis, logistics, risk management, operations, inventory leveling, supply chain improvement, and scenario planning are sure to provide great analytical opportunities.

Will the analysis become public?

The work between the students and your organization is considered confidential. If necessary, the students may be asked to sign a non-disclosure agreement. If this is necessary, we ask that the non-disclosure agreement be such that it does not prevent the students from seeking employment or from building on their experience gained on the project.

From time to time, such company-student projects lead to very interesting business lessons. As a leading business school, we are interested in sharing such lessons with our next generation students and business leaders. We do this through business cases. If such an opportunity exists with your project, we will seek your permission to relate the business lesson through a case study.

Contact Information

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