

BAX 461

Course name: Practicum Initiation

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Time: 3:10 - 5:00 PM

Days (Fall 2018): Sep 28; Oct 5, 12, 19, 26; Nov 2, 9, 16, 30; Dec 7.

UC Davis Catalog Description

Team formation and dynamics, problem framing, client engagement. Team project initiation with focus on requirements analysis, data discovery, documentation, and expectation-setting.

Background

The Practicum is the backbone of the MSBA, spanning the program. The goal of the Practicum is to master Analytics delivery by successfully applying quantitative methods and business knowledge to a real problem at a real organization. Working in a team, each student devotes, in an average week, one to two days on project-work sponsored and directed by an MSBA Industry Partner (MIP).

Coursework associated with the Practicum occurs over a four seminar sequence:

Quarter	BAX	Title	Focus
Fall	461	Practicum Initiation	<i>Preparation:</i> Team, scope, problem/opportunity identification, and engagement
Winter	462	Practicum Elaboration	<i>Definition:</i> Solution attributes, data management, initial modeling
Spring	463	Practicum Analysis	<i>Insights:</i> Technical analysis and recommendation
Summer	464	Practicum Implementation	<i>Delivery:</i> Value identification and communication, and deployment

BAX 461 students begin by gaining knowledge and developing comprehension: framing and scoping the opportunity and its payoffs, familiarizing themselves with data, setting up an effective team structure and working protocols, and developing engagement with the MIP.

In BAX 462 and 463, the learning focus shifts to application and analysis: understanding the business and technical requirement, and doing the modeling, computation and documentation.

The goal for BAX 464 is to demonstrate synthesis and evaluation: finalizing recommendations, communicating them to the MIP, and initiating the associated deployment process.

MIP stakeholder expectations of deliverables vary by project, but typically include functioning software, data architectures, statistical models and algorithms, dashboards, metrics, and

decision support tools. Classroom “deliverables” in the BAX 46x seminar sequence - various activities and assignments - *are designed to strengthen student skills* so that they can do the best possible job on their project.

Action Labels

Students in 46x seminars are expected to develop and exhibit four competencies of a Business Analytics (BAX) consultant:

1. Work productively as part of a project team (*#teamwork*)
2. Engage constructively with the client, in our case, the MIP (*#engagement*)
3. Produce valuable business insight that combines analytical results with qualitative study and secondary research (*#insight*)
4. Create measurable and sustainable client impact (*#impact*)

MSBA graduate possessing these competencies can represent themselves - in their LinkedIn profile, a job application, an interview, the fabled chance encounter in an elevator - using what recruiting professionals call “action labels”: An MSBA graduate should be able to think of herself or himself as

a trained data scientist (*#datascientist*) with a verifiable record of accomplishment (*#achiever*), comfortable mediating between business and technology functions (*#communicator*) in the global professional setting (*#professional*).

Each student should work on getting to a point of comfort applying the action labels *#datascientist*, *#achiever*, *#communicator* and *#professional* to themselves.

BAX 461 Learning Goals

Working in a seminar setting, each individual is expected to demonstrate progress on the learning goals listed below. Each learning goal, in turn, impacts action labels and competencies.

#	Learning goal	Primary effect on	
		Action label	Competence
1	Communicate effectively with team and MSBA program stakeholders	#communicator	#teamwork
2	Apply understanding of group dynamics, knowledge of oneself, and an appreciation of demographic and cultural diversity to accomplish group tasks	#achiever	#teamwork
3	Help foster a professional culture of dependability, collegial supportiveness, and ethical behavior	#professional	#teamwork

4	Transform difficult novel, uncertain or ambiguous situations into opportunities to learn and grow	#achiever	#teamwork
5	Participate equitably in project management workflow	#professional	#teamwork
6	Engage constructively with MIP staff (i.e., clients)	#professional	#engagement
7	Communicate effectively in oral form with technical and non-technical stakeholders, mindful of the audience's diverse interests and abilities	#communicator	#engagement
8	Communicate effectively in writing with technical and non-technical stakeholders, mindful of the readership's diverse interests and abilities	#communicator	#engagement
9	Integrate knowledge of MIP stakeholders, their organizational culture and imperatives, and project realities (e.g., expectations, timelines, technical challenges, etc.) to create a productive environment	#datascientist	#engagement
10	If asked, communicate an accurate, succinct, and timely picture of the project	#professional	#engagement
11	Recognize, critically assess, and positively respond to unexpected project bottlenecks and problems	#achiever	#insight
12	Demonstrate proficiency in collecting, managing and analyzing data	#datascientist	#insight
13	Conduct good research using relevant controlled vocabulary, leveraging available sources, assessing source quality, and respecting ethical concerns	#datascientist	#insight
14	Contribute substantively to the team's oral and written output in class and for the MIP	#achiever	#insight
15	Practice articulating actual business insight rather than simply paraphrasing the output of quantitative analysis	#datascientist	#insight

Progress on action label and competency development will be assessed via quizzes and assignments.

Textbook and Readings

There is no textbook for the course.

BAX 46x courses are a series of seminars that use discussion-based active learning. While *short* lectures do take place, learning largely occurs through discussion and information exchange. Pre-class readings (typically recent relevant articles from research journals or the popular press)

will be assigned via Canvas at least one week before class. Students should expect to be assessed on pre-class reading through discussion, in-class exercises and quizzes.

Learning materials covering the following topics will be assigned as appropriate:

- Engagement strategy
- Issue and value identification
- Opportunity framing and scoping
- Requirements analysis
- Solution formulation
- Data readiness
- Communication
- Project branding
- Project management
- Research methods

Course structure

Students will participate through readings, lectures and activities (in and out of class) on two axes of learning: the BAX consulting process, and the specifics of the team project.

Class sessions will consist primarily of short assessment quizzes, discussions based on pre-class readings or previous assignments, short instructional “lecture” modules, and industry speaker-led discussions. Occasionally, students and teams will have the opportunity to showcase their skill development through presentations graded on action labels and core competencies.

Peer criticism and feedback are the sine qua non of professional teamwork. Thus in the “clinical”, i.e., practice-oriented, setting of the Practicum, peer-to-peer learning is natural. Lessons learned from each others’ mistakes, especially observed fresh, can be instructive in a way that lectures or books cannot. Students will be expected to attentively observe and respectfully critique the experiences of other teams during structured activities and class conversation. This expectation can initially create discomfort, sometimes from the belief that the professor is the only qualified teacher, or from apprehension about conflict. With practice, the discomfort alleviates and learning occurs.

In addition to class sessions, each team will participate in a weekly project update “huddle” with the course instructor via Zoom web conference. Teams will document their task backlog and progress by the evening prior to the meeting.

Grading

Course grades will be based on individual responses on quizzes and activities, written assignments, team presentations, and pre-huddle updates. There will be no examinations. Canvas will contain raw scores for each scored element, which will be normalized when final grades are calculated.

BAX 46x courses are designed to build practice skills, not, as the archaic idiom puts it, “to

separate the men from the boys”. That said, it *is* possible to fail the course simply by being absent from class during scored quizzes activities.

Assignments

Scored assignments include quizzes, blog writing, group exercises, long-form reports, and presentations explicitly created for the course. Each assignment is described below, along with its generic scoring rubric. Graders (the instructor or the TA) will be looking for attributes that illustrate action labels and core competencies with clarity, originality and salience. Due dates are provided in the section at the end of this syllabus; last-minute changes are disseminated via Slack and Canvas.

Weekly Assessment: 20% (individual)

To receive this portion of the credit, the student must answer at least eight of ten in-class assessment quizzes. Quizzes are *administered at any point in the class meeting*. Students with seven or fewer completed quizzes will receive zero points for 20% portion of the course grade. There will be no provision for making up missed quizzes.

Quizzes will assume that the student is conversant with their team project, as well as recent readings and class discussions. Quizzes will be scored on a triage scheme:

- Obviously incorrect answers: 0 points
- Verifiably correct answers: 2 points
- Other answer: 1 point

Blogposts: 15% (individual)

Each student will publish five blogs, each containing at least 300 words. In effect, each student will *individually* write short articles on *instructor-specified* topics related to the Practicum.

The intent of this exercise is to develop each student’s professional communication skill, so the blogs audience will be expected to be professional peers. However, notes published on msba18-19.blogspot.com are only accessible to MSBA stakeholders.

Due to the individual-focused learning goal (and grading scheme), collaboration with anyone else should go no further than broad conceptualization. The writing - in form *and* content - is expected to be entirely the student’s. **Evidence of plagiarism or similar infringement of the Academic Code of Conduct will be taken very seriously.** Blogs will be graded according to the following rubric:

Score	Quality	Rubric
3	Outstanding	<ul style="list-style-type: none">• Contains a thoughtful and readable treatment of the topic.• Narrative is well-structured, with a beginning, middle and end.• Headline is appropriate to the content.• Opening lines make clear what’s coming.

		<ul style="list-style-type: none"> • Embedded links point to useful and relevant material. • Graphics are used to break up blocks of text.
2	Competent	<ul style="list-style-type: none"> • Missing a few attributes of an outstanding blog.
1	Submitted	<ul style="list-style-type: none"> • Off-topic, unreadable or otherwise not meaningful.
0	Missing	<ul style="list-style-type: none"> • Not submitted by due date.

Class Exercises: 20% (individual and team)

Individual and team quizzes and exercises will be assigned during class sessions. The goal of class exercises is to solidify learnings and document outcomes from in-class activities. For instance, an individual one-point quiz may be assigned to assess comprehension after a guest speaker. Another example: each team will outline elements of a specific MIP-facing activity, for four points.

Opportunity Assessment Report: 10% (team)

The opportunity assessment report (OAR) contains the key value-related findings usually associated with business plans. The goal is to describe the “so whats?” of the project, e.g.,

- What are the business conditions and the context of the project?
- Why does the MIP - as an organization - care about the project? Who are the most involved stakeholders, and what are their motivations?
- What is the likely business impact of the anticipated outcomes?
- How will the results be judged? Is the MIP trying to increase revenues? Manage costs? Improve customer service? When expected improvements are qualitative - e.g., attempting a digital transformation of the company - how will they be measured?
- What are the potential workflow and organizational implications of the project? How will life change for the MIP if the project delivers? Will it have an impact beyond the company, into the business sector?

The OAR, expected to contain between 1000 and 3000 words (not counting charts, tables and figures) should be uploaded to Canvas *as a PDF*. Supporting documents (e.g., spreadsheets) are allowed, but the deliverable is the PDF report. OARs will be graded according to the following rubric:

Score	Quality	Rubric
5	Outstanding	Describes the “so whats?” at a sophisticated and thoughtful level, demonstrating understanding of the MIP perspective. Rare, if any, deficiencies in structuring, expression, or English usage. Reflects in-depth engagement with the topic.
4	Competent	Describes the “so whats?” at a serviceable level, without a concomitant in-depth reflection of impact from the MIP perspective. Deficiencies in structuring, expression, or English usage. (Note that language

		shortcomings can often be addressed by deliberate editorial effort.)
3	Limited	A minimal description of the context and desired project outcomes. Displays limited understanding of the MIP organization, the sector in which it operates, the impact of favorable results, and/or organizational implications of success.
1	Submitted	Either not salient to the assignment described in the syllabus, or incoherently written.
0	Missing	Not submitted by the due date.

Presentation - Opportunity Assessment Report: 10% (team)

Each team will formally present their OAR findings in class. The goal is to clearly and persuasively communicate project goals and expected impact on the MIP. Each presentation will last no more than 5 minutes, with an additional 2 minutes allocated for Q&A. Scores will be reduced for going over the time limit. Presentations will be graded according to the following rubric:

Score	Quality	Rubric
5	Persuasive	<ul style="list-style-type: none"> Conveys the clear message that the team understands the project goals and likely implications for the MIP. Generates confidence in the team's ability to research not just the specific application, but also the target business and business sector. Impact is concisely and, as far as possible, quantitatively, estimated. The mechanics of the presentation - computer setup, "viewgraph engineering", speaker transitions, etc. - are smooth, suggesting that the presentation has been rehearsed, perhaps more than once.
4	Informative	<ul style="list-style-type: none"> Conveys the message that the team understands the project goals, but the implications for the MIP are unconvincing. There is evidence that the team has begun its research, but the findings are shallow, possibly marginally relevant. Impact is estimated, but it's an area of improvement There are problems with one or more mechanics of the presentation - computer setup, "viewgraph engineering", speaker transitions, etc. It is likely that the presentation has not been well-rehearsed.
3	Limited	<ul style="list-style-type: none"> Conveys the message that the team understands the project goals, but the implications for the MIP are unconvincing. There is little evidence of relevant research.

		<ul style="list-style-type: none"> • Impacts estimation remains a work in progress. • There are multiple problems with the mechanics of the presentation - computer setup, “viewgraph engineering”, speaker transitions, etc. • It is likely that the presentation has not been rehearsed.
2	Minimal	<ul style="list-style-type: none"> • The presentation is delivered, but that’s about the most supportive thing that can be said of it.
0	Missing	<ul style="list-style-type: none"> • Presentation is not delivered

Quarter Summary: 10% (team)

Each team will submit a short (expected to be less than 1,500 words) summary of the team’s Practicum efforts and achievements over the quarter, containing:

- *History*: key project events and deliverables completed
- *Team*: team organization and responsibilities
- *Accountability*: table of tasks completed in quarter, with effort allocated (in % terms) between team members
- *End-state*: work in process and task backlog at quarter-end
- *Downsides*: known risks and bottlenecks
- *Outlook*: project status and plan for remaining project horizon

Note that Quarter Summary scores will not be based directly on how the project is going. The goal of the exercise is to thoughtfully, concisely, and accurately describe the project environment, with grading according to the following rubric:

Score	Quality	Rubric
5	Outstanding	Contains the above-specified level of detail expressed in a well thought out manner. The reader is persuaded that the team is working well together, that the relationship with the MIP is alive and constructive, and that next steps and risks are well-understood.
4	Competent	Contains the required detail, but potentially lacks one or two necessary attributes of an outstanding summary.
3	Limited	Contains the required detail, but potentially lacks multiple necessary attributes of an outstanding summary.
1	Submitted	Missing the required information, or incoherently written.
0	Missing	Not submitted by the due date.

Presentation - Quarter Summary: 10% (team)

On the last class session, each team will formally present their activity summary and project status. The goal is to clearly communicate the work done and the prospect for the coming quarter. Each presentation will last no more than 5 minutes, with an additional 1-2 minutes allocated for Q&A. Presentations will be scored according to the following rubric:

Score	Quality	Rubric
5	Persuasive	A well-rehearsed presentation convinces the listener that the team is working well together, that the relationship with the MIP is alive and constructive, and that the risks as well as next steps are well-understood.
4	Informative	The presentation contains persuasive elements, but the message and/or the delivery contain weaknesses fixable by additional preparation.
3	Limited	The content and/or the delivery contain structural deficiencies that draw attention from the message.
2	Minimal	The presentation is delivered, but that's about the most supportive thing that can be said of it.
0	Missing	Presentation is not delivered

Individual Engagement: 5% (individual)

Learning occurs fully when students engage fully in class activities, contribute their fair share to team output, and deport themselves professionally. Failure to demonstrate full professional engagement by, e.g., not responding to request for input in class or remaining passive during discussions, routinely arriving late or leaving early, attending to the laptop or phone, not meeting project deliverable expectations, low peer evaluation scores from team members, or occasioning criticism from MIP stakeholders, will reduce these scores. (See following section on Behavioral Norms for more detail.)

Behavioral Norms

To enhance the seminar learning environment, students are expected to act in a professional manner. Professional behavior includes adhering to course requirements, being respectful of other class participants, and *actively* contributing to course-related discussions and activities *inside and outside class*. Specifically:

1. Students are expected to abide by the University of California-Davis code of conduct found at <http://sja.ucdavis.edu/cac.html>.
2. Doubts or questions should be directly to the instructor as soon as feasible, preferably via Slack. In addition to the course channel (#bax461-4), each Practicum group will have a dedicated channel for project-related communications (e.g., pr-adsk). Students are

- expected to use good judgement to separate individual vs team vs class related queries.
3. Phones and laptops are not to be used in class *except when explicitly allowed* for quizzes or other activities. If an urgent call needs to be answered, the student should unobtrusively step out of the classroom and return as soon as possible.
 4. Research shows that writing (rather than typing) is highly correlated with memory and learning. Class notes are expected to be made on paper.
 5. Web-conferences with the instructor (weekly huddles or ad hoc meetings) are a routine practice. Participants in pre-scheduled web meets are expected to join from a quiet location using video and audio, i.e., to be full and equal contributors.
 6. Unless discussed with the instructor *before the due date*, there will be no exceptions to assignment deadlines. An assignment submitted up to 24 hours late will lose 20% of the grade. Assignments submitted more than 24 hours past deadline will be scored zero.
 7. Grades heavily depend on team output, which can be reduced by free-riding and social loafing. Each member of Practicum teams will be asked to evaluate every other member on attendance at group meetings, effort, meeting deadlines, responsibility, proactivity and quality of work.

Course Calendar

Key dates	Event	Note
20180928	First day of class	Project introduction and discussion of expectations
20181007	Blogpost 1	Short blogpost on a specified topic (detail on Canvas)
20181021	Written OAR due	Uploaded to Canvas
20181026	OAR presentations	In-class team presentations
20181028	Blogpost 2	Short blogpost on a specified topic (detail on Canvas)
20181104	Blogpost 3	Short blogpost on a specified topic (detail on Canvas)
20181118	Blogpost 4	Short blogpost on a specified topic (detail on Canvas)
20181122	Presentation <i>scheduled w/ MIP</i>	MIP presentation of project status needs to occur before the last day of classes, either in-person or via web-conference
20181125	Blogpost 5	Short blogpost on a specified topic (detail on Canvas)
20181202	Written quarter summary due	Submitted on Canvas
20181207	Quarter summary presentations	Fall quarter activity summary presentations to class; last session of Fall quarter