# Roadmap To The Future:
# An Undergraduate Business Program Curriculum Redesign

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## ABSTRACT

*In 2020, the University of Pittsburgh's College of Business Administration (CBA) had reached an inflection point in its growth that warranted a full curriculum review. As with most strategic planning work in 2020, that review was delayed as the school responded to the COVID-19 pandemic including a pivot to fully remote instruction. When the curriculum review committee reconvened in 2021, the school was literally bursting at the seams – welcoming its largest incoming class ever, over-enrolling some sections to ensure that students slated to graduate could get the courses they needed, and seeking alternative classroom and office space to supplement its traditional campus location. Against that backdrop, the committee's work became even more urgent, and it began with a comprehensive analysis of the current state CBA curriculum. To start, a review of the literature compared against the committee's goals narrowed the scope of the analysis to two lenses for the review: A horizontal review (verifying that multiple sections of the same course cover the same learning objectives) and a subject-area review (verifying that similar content taught in different subject areas was reinforcing, not redundant). Second, a suitable curriculum mapping taxonomy was sought from within the field of business, and the American Institute of Certified Public Accountants (AICPA) provided inspiration in the form of its CPA Evolution Model Curriculum. That curriculum includes a line of sight from the organization's top level goals to course topics to learning objectives to courses, and the team was able to build an analogous CBA Model Curriculum Template to be populated with its own school-, curriculum-, and course-level data. Third, the team accessed all available, systemic metadata about each of CBA's existing courses and pre-populated its template. To fill in gaps in the systemic data and dig in on emerging areas of focus such as equity, diversity, and inclusion (EDI), data analytics, and integrated learning, interviews were conducted with course leads, and finally the comprehensive, current state CBA Curriculum Map was complete, highlighting the curriculum's strengths, gaps, and redundancies for the full committee to review and action both from the perspective of horizontal and subject-area reviews. In summary, this baseline curriculum map has been invaluable in enabling CBA to move forward with its development of an evidence-based, future state curriculum, and the process of mapping the baseline curriculum has created a playbook that can be leveraged again for future curriculum reviews.*

## INTRODUCTION AND CONTEXT

In September of 2020, the Undergraduate Programs Committee (UPC) at Pitt Business was charged with both examining the undergraduate (CBA) curriculum and making recommendations to revise the curriculum. The UPC was explicitly charged to consider the following:

- Be forward looking in considering both marketplace needs and the preparation our students will come with to Pitt;
- Be based upon a clearly articulated value proposition that translates into specific learning objectives for the program;
- Increase the data-analytic capabilities of all CBA students to deal with the data-driven world of business;
- Build on the momentum CBA developed over the last 25 years;
- Reflect the core competencies, resources, and reputation of Katz/CBA and the University more broadly;
- Align with the strategic priorities of the University of Pittsburgh as articulated in the Plan for Pitt and with the Katz/CBA strategic plan. For example, how will the curriculum address the University priority of Diversity and Inclusion;

- Abide by the constraints of University regulations for degree programs as well as University accreditation through Middle States and AACSB accreditation of Katz/CBA.

As part of the curriculum review, the UPC collected and analyzed both qualitative and quantitative data. The UPC determined that four stakeholder groups were of primary importance to contribute to this process: faculty, current students, recent alumni, and recruiters. Primary data included surveys of faculty, current students, and recent alumni. Input from recruiters was collected through focus groups. The UPC also analyzed curricula from 16 schools as benchmarking programs. These schools were collected based on several criteria such as: similar rankings, competitors for student admissions, and/or identified as peer or aspirations peer programs. Additional secondary data analyzed by the UPC consisted of results from annual student satisfaction surveys as well as findings from a 2019 Student Experience Taskforce.

While the full results of the curriculum review are not relevant to the current project, several key findings, combined with elements of the UPC's charge, influenced the development of this project. First, one charge to the UPC related to understanding how the curriculum addresses the university's priority of diversity and inclusion. Results from the faculty survey indicated that the most common response to a question about how extensively equity, diversity, and inclusion (EDI) are integrated into the curriculum was *not enough information to answer*. However, nearly 77% of current CBA students and 60% of recent alumni felt that EDI is *substantially* or *moderately* integrated into the CBA curriculum. Further, a large majority of current students (87%) and former students (80%) felt the CBA curriculum prepared them *adequately*, *well*, or *very well* to "thrive in increasingly diverse work environments." Follow-up discussions with faculty in the Organizations and Entrepreneurship (O&E) group indicates that EDI is heavily incorporated into required coursework. While both current and former students feel fairly comfortable with the level of EDI coverage in the curriculum, and faculty in the O&E group have a better understanding of EDI coverage in the curriculum, the majority of faculty in the business school did not understand or know the extent of EDI coverage in the CBA curriculum. For faculty and other stakeholder groups to have an accurate understanding of EDI coverage in the curriculum, the school needs to both track EDI coverage within the curriculum and then ensure it communicates that information to relevant stakeholder groups.

Related to the charge to "Increase the data-analytic capabilities of all CBA students to deal with the data-driven world of business", the UPC found the current curriculum lacked sufficient analytics coverage relative to most of the benchmarked programs. In comparing the CBA curriculum to strong analytics coverage in benchmarked programs, benchmarked programs incorporated more analytics coverage in *core* and *required major* courses, whereas the CBA curriculum incorporated analytics coverage more frequently in *elective* courses. An analysis of the data from all stakeholder groups further supported the need to better incorporate analytics in the CBA curriculum. In one of the most striking findings, 90 out of 91 recent alumni surveyed supported a proposal to incorporate more required data analytics coursework early in the program of study. When asked to indicate which skills recent alumni felt most dissatisfied with during the CBA program, data analytics skills were the most frequently indicated skills. Current students reflected the same general pattern regarding data analytics coverage in the curriculum. Of the current students who were surveyed, 91% supported required data analytics relatively early in the program of study and 41% of those students felt they were *minimally competent* or *not competent* in data analytics. Not surprisingly, there was also considerable faculty support and recruiter support for continued and increased coverage of data analytics in the curriculum. Relating to data analytics tools, however, there was more disagreement. Tools such as Python, R, Tableau, and Excel (especially advanced Excel features) received differing levels of endorsement and support among the various stakeholder groups. While the UPC made curriculum recommendations to further bolster the data analytics preparedness of students in the program, the UPC also made a related recommendation which was not technically part of revising the curriculum: better tracking of data analytics coverage, including student exposure to tools, throughout the curriculum. Only by knowing what is covered, when it is covered, and how it is covered, can the curriculum truly be designed in a way to ensure students get consistent exposure to and practice with data analytics throughout their experience in the program.

Lastly, while not directly resulting in revisions to the CBA curriculum, two other charges to the UPC curriculum revision project informed this current research project:

- Be based upon a clearly articulated value proposition that translates into specific learning objectives for the program;
- Reflect the core competencies, resources, and reputation of Katz/CBA and the University more broadly;

In order to ensure the curriculum "translates into specific learning objectives for the program," the authors of this project realized the need to clearly map how the objectives of individual courses in the curriculum map to and support the overall learning objectives of the program. Further, a core competency and focus of both the undergraduate and graduate programs at Pitt Business is experience-based learning. If the curriculum should "reflect the core competencies, resources, and reputation of Katz/CBA," and part of that reputation is built on student preparedness through experiential learning, measurement and mapping of experiential learning is needed. While there have been attempts to measure the level of experiential learning within courses in the curriculum, this project provides the school with a clearer way to map students' exposure to various types of experiential learning throughout the program.

In summary, the goals of this research project are four-fold:

1. Provide a way to measure and track EDI coverage in the curriculum to ensure relevant stakeholder groups can accurately be informed.
2. Provide a way to measure and track data analytics coverage in the curriculum to support student preparedness throughout the program.
3. Track how individual courses map to specified learning objectives for the program.

4. Map students' exposure to experiential learning throughout the program to ensure the reputation of a strong experiential learning program is being delivered to students.

The goals of the project are addressed through curriculum mapping.

# LITERATURE REVIEW

The team then naturally looked to the rich body of literature on curriculum mapping to plan and inform its work. Although the *raison d'être* for the UPC's curriculum mapping work had been clearly and intuitively articulated as noted previously, the literature nonetheless validated why the *process* of curriculum mapping – as much as the output – is such a critical component of strategic planning at the academic unit level. (As Dwight Eisenhower is famously quoted as saying, "Plans are worthless, but planning is everything.") In brief, the goals of the UPC's effort were very much in line with the benefits of curriculum mapping as noted in the literature. First, the exercise of curriculum mapping fosters communication and collaboration – and in turn engagement – among faculty. While this seems self-evident, the underlying drivers are what makes the process of curriculum mapping so valuable for collaboration. For example, the act of mapping the curriculum encourages faculty to embrace reflective practice and to recognize the curriculum as dynamic rather than static (Kapucu, 2017) while supporting individual instructors (Herbold, 2012) and helping them to assess their own position within the curriculum (Wijngaards-De Meij & Merx, 2018). Further, "In an academic world where teaching is often a lonely endeavor, enhancing cooperative approaches towards reviewing and improving the curriculum is a…positive aspect" (Wijngaards-De Meij & Merx, 2018). Second, curriculum mapping (and the attendant artifacts that it produces) have the benefit of creating transparency for all stakeholders, whether students, faculty, staff, the larger institution, employers, government agencies, and accrediting bodies (Kapucu, 2017; Veltri et al, 2011). Third, the latter group – accrediting bodies – is an increasingly critical stakeholder in the landscape of higher education, and curriculum mapping ensures that the linkage from stated learning objectives to courses of study to actual learning outcomes is systematically documented and demonstrated (Veltri et al, 2011). Fourth, curriculum mapping shines a bright light on the gaps and/or redundancies in the curriculum, which are often not visible from the vantage point that most faculty operate at (i.e., the individual course or subject level). For example, simple though it may seem, a curriculum map can help, "to make sure one competency is addressed by at least one core course in the program" (Kapucu, 2017). (As an aside, Wijngaards-De Meij & Merx (2018) frame this in a humorous but relatable way: "Many academic developers and teachers in higher education will recognize the following situation. Students who claim, even swear, hands on their hearts, that they have never practiced skill A or method B before, or that they have never heard of theory Y or author Z, while the teacher is absolutely convinced that surely this must have come up at some point in previous modules, courses, or subjects. Highly frustrating considering the fact that in a curriculum one wants to build upon already existing knowledge and skills.") In a related fashion, De Rodanas Valero et al (2020) refer to this type of curriculum audit as "constructive alignment" that similarly ensures coherence from intended learning objectives through to meaningful activities to actual learning outcomes. Finally, and perhaps most importantly, the larger justification for curriculum mapping as a value-added strategic planning activity is succinctly summarized by Miña et al (2021) as, "ensuring that students graduate with the competencies needed to thrive in the workplace and life."

Having confirmed the rationale for curriculum mapping as the right exercise at the right time in the evolution of CBA, the team further consulted the literature to validate its understanding of the definition of a curriculum map, its tools and components, and its development process. On the topic of defining a curriculum map, the literature is clear and coherent. A curriculum map is fundamentally an assessment tool (Kapucu, 2017) that systematically breaks down courses into their constituent parts and reconstructs those components into a larger, multifaceted representation of the curriculum that answers the fundamental question, "where do we teach what?" (Kononowicz et al, 2020). Now clear on the "what" of a curriculum map, the next step is clarifying the tools and components required to get there, and again the literature is clear and coherent: The "raw material" for curriculum mapping consists of a template for capturing course meta-data, a syllabus assessment instrument, and structured forms for content analysis (Miña et al, 2021). In turn, those tools are used to capture and document components of the curriculum including teaching methods, content, learning materials and resources, and assessments (Rawle et al, 2017). Finally, the process of developing the curriculum map using those tools is both complex and comprehensive (Al Dera, 2021); comprises both qualitative and quantitative analysis (Miña et al, 2021); and has been posited by Harden (2001) as having five generic steps as noted by Kapucu (2017):

- Assess the needs
- Scope the task
- Establish the links
- Populate the windows (i.e., the various views of the curriculum)
- Decide the format of the map

With clear validation of the definition, tools and components, and development process of a curriculum map, the team turned its attention to challenges noted in the literature in order to mitigate and circumvent them as much as possible in its own work.

Challenges to effective curriculum mapping noted in the literature fall broadly into two categories, inside-out and outside-in. The inside-out challenges typically involve essential stakeholders' (i.e., faculty and instructors) hesitation about taking on the extra work involved in both (1) contributing to populating the original curriculum map, and (2) updating/maintaining the curriculum map going forward (Wijngaards-De Meij & Merx, 2018). In some cases, this resistance can be effectively mitigated by enlisting the help of student workers to assist with the more mundane, administrative aspects of gathering and parsing course meta-data. From an outside-in perspective, Allen (2004) notes that the primary challenge to effective curriculum mapping results from the dual realities

of (1) a general lack of communication between faculty inherent in the structure of most academic units along with (2) the incessant pace of change in programs, courses, and staff over time (Wijngaards-De Meij & Merx, 2018). These outside-in challenges, however, are much harder to mitigate, so no easy solution presents itself – rather, they need simply to be managed as part of the overall curriculum mapping process.

In conclusion, a thorough review of the literature set the team up for success by re-affirming the rationale for conducting curriculum mapping to begin with; validating a common definition of a curriculum map, its tools and components, and its development process; and warning of common challenges presented during the curriculum mapping process. Armed with this foundation, the team proceeded to develop the Pitt Business CBA curriculum map.

# CBA CURRICULUM MAPPING PROCESS

The Harden generic steps to curriculum mapping (2001) noted in Kapucu (2017) dovetailed well with the process used for the development of the curriculum mapping tool used in the College of Business. The process is broken down to four steps: assess needs, scope the task, establish the links, and populate the windows.

### Assess Needs

The formal curriculum review process indicated a number of open needs at both the micro and macro level that could only be addressed through a curriculum mapping activity.  These needs included:

- Concerns about topic and tool duplication between courses and instructors covering the courses (micro level). Example: The same Harvard Business case was being used in both a core Organizational Behavior and a core Management class with accompanying repetition in topic coverage
- Desire to demonstrate coverage of Equity, Diversity and Inclusion (EDI) topics in a majority of classes in the business school curriculum (micro level) in anticipation
- Ensure cutting edge skill development and delivery in light of skill coverage of peer and aspirant competitor schools' curriculum (micro level).
- Identification of topic or skill gap since previous curriculum review (micro level)
- Ensure coverage of college's mission and strategic objective (macro level)
- Assessment of student learning outcomes (macro level)
- Ensure course content and sequence in alignment with professional certification updates and changes (macro level)
- Ensure compliance with anticipated skill and topic coverage in AACSB certification
- Desire to develop a cutting edge curriculum that establishes a unique competitive advantage for the school

### Scope the Task

Many curriculum mapping projects target specific needs such as strategic planning, student learning gains, degree program success or college performance.  Stimulated by the substantive realignment of the college's core curriculum and the challenge of moving the program to an even more elevated ranking in the top 25, this project took on a comprehensive scope.  This paper focuses only on the segment of the project examining the CBA's core curriculum. As a result of the curriculum review, this core curriculum will support a new three course sequence covering statistics, business analytics and data visualization. Subsequent analyses will include an assessment of all courses in the curriculum with analyses focused on mapping within and between majors, within and between interest groups, within and between certificates and across the college.  Accordingly, this curriculum map will cover micro level elements including topics covered and activities completed at the class session level, through assessment types used across classes at the midrange level, and college learning outcomes addressed at the macro level.

### Establishing the Links

Multiple databases are maintained and annually updated by the college and each served as a source of information for the curriculum mapping tool developed for this project. At the conclusion of each academic year, instructors are required to enter data into a "faculty accomplishment system". Some of the data requested include experiential based learning activities utilized and skills covered. In addition, a repository of CBA course syllabi is maintained with all syllabi used each academic year added each May to the database.

### Populating the Windows on the Curriculum Mapping Tool

An undergraduate student from a CBA leadership program which includes research internships, was selected to work with the researchers to enter data from the databases noted. The student reviewed syllabi for topics covered, activities completed, and tools and skills used. Data unavailable from the databases was gathered in one-on-one interviews with instructors of required core classes.

## INITIAL CBA CURRICULUM MAP AND FINDINGS

As a proof of concept, the underlying courses for the initial CBA curriculum mapping project were limited to only the 12 required courses in the undergraduate business curriculum. First, these courses' components were analyzed for alignment to CBA's seven

assurance of learning goals (Exhibit 1 below), which form the foundation of its accreditation with the Association to Advance Collegiate Schools of Business (AACSB). To visualize the curriculum map through that lens, a heat map was created following the model of Miña et al (2021). This heat map is included below as Exhibit 2 and shows clearly that the core courses align and support the assurance of learning goals well. (Note that two of the assurance of learning goals are addressed in elective courses and co-curricular programming rather than directly in the required core courses.) In addition to that alignment, the 12 required courses were further mapped along the following dimensions:

- <u>Course Learning Objectives</u> (free-form text) – These were parsed from each course syllabus.
- <u>Topics Covered</u> (free-form text) – These were parsed from each course syllabus.
- <u>Skills Used</u> (pick list) – These were chosen from a multi-select pick list (i.e., "choose all that apply") as follows:
    - Written
    - Verbal
    - Persuasion/Negotiation
    - Leadership
    - Problem Solving Skills
    - Decision Making Skills
    - Critical Thinking Skills
    - Teamwork Skills
    - Research Skills
- <u>Tools Used</u> (pick list) – These were chosen from a multi-select pick list (i.e., "choose all that apply") as follows:
    - Excel
    - Python
    - R
    - Tableau
    - Other
- <u>Activity Types Used</u> (pick list) – These were chosen from a multi-select pick list (i.e., "choose all that apply") as follows:
    - Case Study
    - Discussion
    - Field Trip / Site Visit
    - Labs
    - Lecture
    - Project
    - Public Reviews
    - Service Learning
    - Simulation
    - Writing
    - Other
- <u>Assessments Used</u> (pick list) – These were chosen from a multi-select pick list (i.e., "choose all that apply") as follows:
    - Debate
    - Exam
    - Presentation
    - Problem Sets
    - Project (client or other)
    - Public Review
    - Written Work (essay, short answer)
    - Other
- <u>Cases Used</u> (free-form text) – These were parsed from each course syllabus.
- <u>EDI Topics Covered</u> (pick list) – These were chosen from a multi-select pick list (i.e., "choose all that apply") as follows:
    - Ethnic Diversity
    - Gender Diversity
    - Generational Diversity
    - Racial Diversity
    - Sexual Orientation Diversity
    - Other
- <u>Data Analytics Addressed</u> (pick list) – This was a simple, binary response:
    - Yes
    - No

That data in turn was visualized in various descriptive exhibits, such as Exhibit 3 below, to shed light on gaps and/or redundancies in the curriculum. For example, as noted in Exhibit 3 below, lecture is the dominant activity type in the required

courses with very little use of simulation or case study. Finally, the reliability of the data is solid, being based on nearly 140 class sections of the CBA required courses that had been taught over the prior year (Spring 2021, Summer 2021, and Fall 2021) as noted in Exhibit 4 below. In all, the initial curriculum mapping of the CBA required courses provided additional learnings that inform the effort to extend the mapping to all CBA courses.

The curriculum mapping activities provided important information to a series of course development initiatives that arose from the college's curriculum review. For instance, one of the college's core curriculum courses needed to be revised following the retirement of the course originator who had taught the class for all twenty-five years it was offered. Using the curriculum mapping tool, some topics covered in the retiree's class were found to overlap coverage in another core course. The individual hired to replace the retiree now has a clear understanding of the nature of topics to address in the new
version of the course.

As a revamped core curriculum (a reduction in general education requirements and a shift to business school delivery of a new three course sequence in statistics, business analytics and data visualization) is being developed in the business school, concerns were raised with regard to gaps in the development of key business skill sets. Accordingly, a survey of interest groups covering the core sections enumerated in Exhibit 4 was completed. The survey asked each interest group to examine its core classes and identify skill sets students should have when taking the core courses and then to assess the skill sets students actually possess, and those they develop in the course. The skills examined (problem solving, decision making, critical thinking, analytical, teamwork, communication, time management and business integration and acumen) were assessed as to their coverage ("no exposure", "introduced", "practiced" and "proficient") in the class. Again, the curriculum mapping tool indicated gaps in critical thinking skills and time management that can now be addressed by instructors involved in the delivery of core courses.

The college prides itself on providing students with experience-based learning (EBL) opportunities across the curriculum. The mapping tool developed allows assessment of the extent to which this EBL goal is met by those teaching in the core as compared to those teaching major specific and elective courses. The frequency of activity noted in Exhibit 3 informs current efforts on the part of faculty to weigh the use of EBL in those courses with possible consideration given to increasing its usage. While the level of EBL is low in CBA's core courses, this is not necessarily surprising. Many of these courses are large lecture courses which limit the use of EBL. The expectation is that the planned mapping of required major and elective courses should show an increase in the use of and variety of experience-based learning in the curriculum.

Finally, as the College of Business engages with its largest student population to date and works to elevate its position in the Top 25 rankings, the curriculum mapping activity has provided valuable insight into the types of experiences prospective students may encounter in the classroom. As those activities are varied, they provide a strong foundation for marketing the core program to incoming students.

# FUTURE DIRECTIONS

Having established the urgency and rationale for mapping the CBA curriculum as part of larger strategic planning work at the school, many intriguing future directions have emerged. Those future directions group naturally into extending the what, how, and why of this initial effort. Concerning the "what", two obvious areas emerge: First, as noted previously, extending the initial curriculum mapping proof of concept from just the CBA required courses to all CBA courses is the logical extension of the initial effort – an "economy of scale" to put it in business terms. Second, an intriguing, related "economy of scope" that presents itself as well is to move beyond the undergraduate level and map the graduate business curriculum, both MBA and specialized MS programs. Based on the review of the literature, curriculum mapping is more common at the graduate level in professional schools such as law and business, so this kind of "reverse engineering" promises to unlock additional insights that may not have emerged had the mapping proceeded in the opposite (traditional) order. Concerning the "how", the literature is clear that implementing a curriculum mapping software tool is essential for not only housing the relevant curriculum metadata but also facilitating visualizations through various "windows" or lenses. An interesting example of actionable insight derived from the use of a curriculum mapping tool is the example of an undergraduate "program [that] changed from offering single courses, coordinated by individual instructors in the first two years of the undergraduate program, to providing clusters of four courses around a central theme or research topic, making teams of instructors responsible for the total cluster" (Wijngaards-De Meij & Merx, 2018). Further, such a curriculum mapping tool would enable extending the work from simply curriculum mapping (i.e., documenting current state) to curriculum design and curriculum management. Intriguing avenues to explore along these dimensions are the various realities of the curriculum as noted by Veltri et al (2011) – intended curriculum, designed curriculum, communicated curriculum, enacted curriculum – as well as the continuous improvement notion of actively driving a feedback loop of designing, implementing, monitoring, evaluating, and optimizing the curriculum (Kononowicz et al, 2020). A related need is a more robust visualization of the curriculum map. Any software identified or created for the mapping project, needs to include functionality for robust visualizations of the data. These visualizations are needed to help stakeholder groups more clearly identify trends and insights from the mapping process. Finally, and perhaps most importantly, concerning the "why" of curriculum mapping is looking ahead toward publishing the curriculum map for that most critical stakeholder group – students. As Veltri et al (2011) notes, "curriculum maps provide students with information about the program structure and faculty expectations. Essentially, the maps help students see coherence of program curricula or understand how individual courses relate to overall program outcomes." In all, the curriculum mapping work that has been undertaken has both met the charge given to the committee and also opened up many rich avenues of potential future enhancements and research.

# EXHIBIT 1
## UNIVERSITY OF PITTSBURGH COLLEGE OF BUSINESS ADMINISTRATION (CBA)
## ASSURANCE OF LEARNING GOALS

Graduates of the University of Pittsburgh's College of Business Administration should demonstrate the following (order does not imply priority):

- <u>Expertise in One Career Focus</u>.  Demonstrate in-depth knowledge and skills in at least one academic/career focus through completion of majors, certificates, minors, and electives.
- <u>Business Management Literacy</u>. Demonstrate what every BSBA graduate is expected to know about business and management at graduation. This literacy is developed in core and major courses taught in Pitt Business, and in particular courses required of all business students and offered in the University of Pittsburgh's Dietrich School of Arts and Sciences.
- <u>Competency in Analysis and Decision Making</u>. Demonstrate competency in the fundamentals of analyzing problems and making decisions with standard business data and data sources using appropriate quantitative and qualitative methodologies.
- <u>Competency in Professional Communication and Leadership</u>. Demonstrate competency in interpersonal skills, including concise and persuasive written and presentation communication.
- <u>Competency in Application</u>. Demonstrate competency in applying acquired knowledge and skills in real-world situations.
- <u>Exposure to Diverse Global Perspectives</u>. Acquire a basic knowledge of at least one nation, region, or culture in areas such as language, history, political systems, literature, and artistic expression.
- <u>Exposure to the Natural and Social Sciences</u>. Acquire an exposure to the knowledge and methodologies used to explore natural, individual, social, and cultural phenomena.

# EXHIBIT 2
## HEAT MAP OF ALIGNMENT OF CBA REQUIRED COURSES TO CBA ASSURANCE OF LEARNING GOALS

**Key**

| | |
|---|---|
| Full Alignment | (dark gray) |
| Partial/No Alignment | (light gray) |

| CBA Required Courses | Expertise in One Career Focus | Business Management Literacy | Competency in Analysis and Decision Making | Competency in Professional Communication and Leadership | Competency in Application |
|---|---|---|---|---|---|
| Financial Accounting | Full | Full | Full | Partial | Partial |
| Managerial Accounting | Full | Full | Full | Partial | Full |
| Managerial Economics | Full | Full | Full | Partial | Full |
| Managerial Ethics and Stakeholder Management | Partial | Full | Partial | Full | Full |
| Introduction to Finance | Full | Full | Full | Partial | Partial |
| Introduction to Marketing | Full | Full | Full | Partial | Partial |
| Organizational Behavior | Full | Full | Partial | Partial | Full |
| Fundamentals of Business Communication | Partial | Full | Partial | Full | Full |
| Quantitative Methods | Partial | Full | Full | Partial | Partial |
| Operations Management | Full | Full | Full | Partial | Partial |
| Managing Complex Environments | Partial | Full | Full | Partial | Full |
| Strategic Management | Partial | Full | Full | Partial | Full |

" occur primarily in CBA electives and co-curricular programming.

**EXHIBIT 3**
**FREQUENCY OF ACTIVITY TYPE IN CBA REQUIRED COURSES**
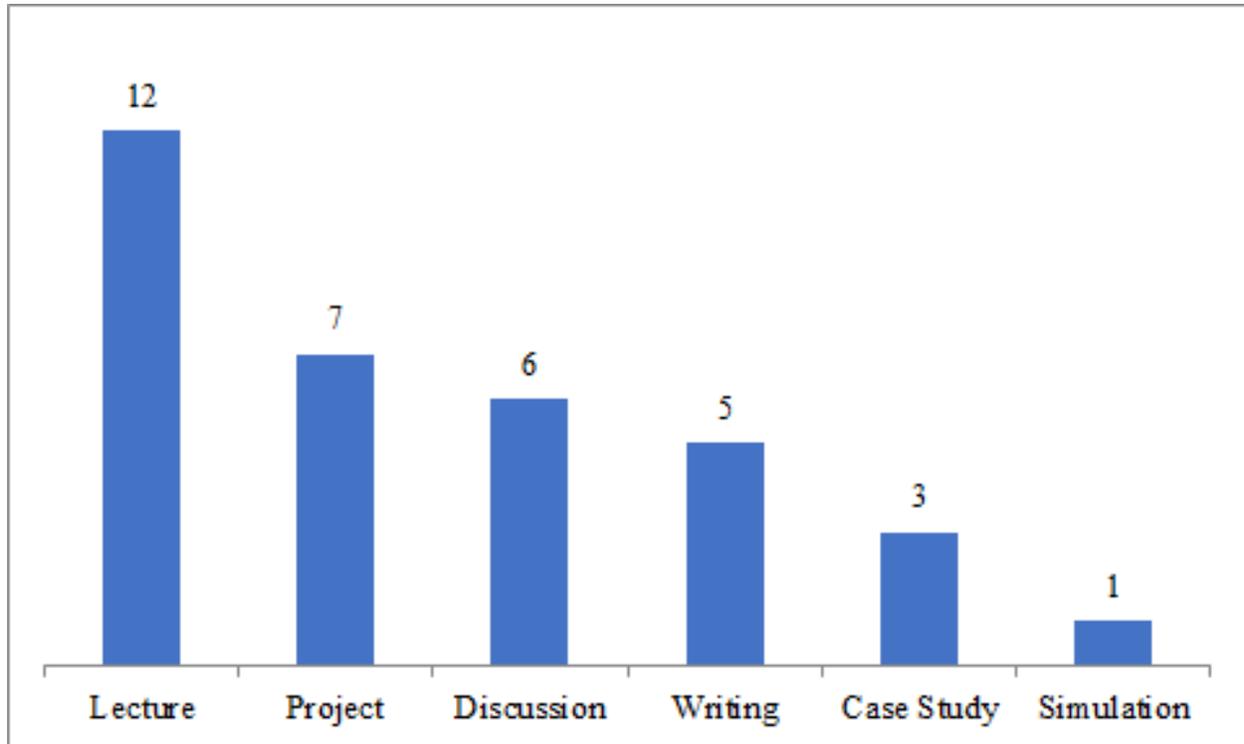


Note: N does not equal 12 because some courses use multiple activity types.

**EXHIBIT 4**
**NUMBER OF SECTIONS OF EACH CBA REQUIRED COURSE OFFERED ANNUALLY**
**(SPRING 2021, SUMMER 2021, AND FALL 2021 TERMS)**

| Course | Sections |
|---|---|
| Fundamentals of Business Communication | 27 |
| Strategic Management | 17 |
| Operations Management | 15 |
| Organizational Behavior | 13 |
| Managerial Ethics and Stakeholder Management | 13 |
| Managerial Accounting | 9 |
| Introduction to Finance | 8 |
| Quantitative Methods | 8 |
| Introduction to Marketing | 7 |
| Managing Complex Environments | 7 |
| Financial Accounting | 7 |
| Managerial Economics | 7 |
| | 138 |

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