1. Department/Program Mission

BIT Department Mission:
To serve the economic interests of industry and the evolving needs of society in a challenging, rapidly-changing, global environment, the Department of Business & Information Technology capitalizes on the strong technological emphasis of Missouri S & T to enable individuals to excel in a technology-centric business world. Recognizing this rapid evolution of the marketplace, we create and disseminate knowledge impacting the theory and practice of business.

BIT Undergraduate Degree Programs
The BIT department has two undergraduate degree programs. One is the Bachelor of Science in Business and Management Systems as well as the Bachelor of Science in Information Science and Technology. Consistent with our mission, with a focus of management through technology, business and information technology are integrated in each of our degree programs, which will be evident from our learning outcomes.

2. Student Learning Outcomes (SLO)

a. Campus-Wide Student Learning Outcomes:
Programs must demonstrate that their graduates have:
   I. An ability to communicate effectively both orally and in writing.
   II. An ability to think critically and analyze effectively.
   III. An ability to apply disciplinary knowledge and skills in solving critical problems.
   IV. An ability to function in diverse learning and working environments.
   V. An understanding of professional and ethical responsibility.
   VI. An awareness of national and global contemporary issues.
   VII. A recognition of the need for, and an ability to engage in, lifelong learning.

b. Additional Program Specific Student Learning Outcomes (Optional)

Undergraduate learning goals are a central concept of our department operations. The mission of the Department involves knowledge creation and dissemination with a
strong emphasis on management through technology. The mechanism for realizing these learning goals is reflected in each syllabus for every course. As discussed above, our faculty members for all degree programs are central in the management of achieving these learning goals. The undergraduate degree programs learning goals are described below.

**Communication** - Students can communicate ideas to others through both written and oral means.

**Critical Thinking** - Students can think critically when presented with a situation to analyze, using analytic and reflective thinking skills. They incorporate an understanding of ethical, multicultural, and diversity issues.

**Teamwork** - Students can work well in a team.

**Technology Proficiency** - Students can use advanced computer software (databases and enterprise resource planning).

### 3. Mapping of Program’s Student Outcomes to Campus Student Learning Outcomes

Map your Student Outcomes (such as from ABET or other Accreditation Commission) from your Program to the Campus SLOs (above). If you use campus SLOs, this section is not needed.

I. An ability to communicate effectively both orally and in writing. This is directly measured in both written and oral form.

II. An ability to think critically and analyze effectively. This is directly measured using a survey measurement from Insight.

III. An ability to apply disciplinary knowledge and skills in solving critical problems. This is measured as a component of technology proficiency and in many written assignments.

IV. An ability to function in diverse learning and working environments. This is directly measured as a component of teamwork.

V. An understanding of professional and ethical responsibility. This is not directly measured but is a part of the critical thinking assessment.

VI. An awareness of national and global contemporary issues. This is not directly measured but is a part of communication assignments, critical thinking, and technology proficiency.

VII. A recognition of the need for, and an ability to engage in, life-long learning. This is not directly measured but it is a part of critical thinking and technology proficiency.

### 4. Curriculum Mapping to Campus and/or Program Outcomes

Map your Curriculum to your Student Outcomes (or directly to Campus SLOs). Each course syllabus in the department has a grid with showing which outcomes are components of the course. In addition to this the department maintains a google sheets share with this mapped to every course. Each syllabus and this sheets document can be shared upon request.
5. Methods/Instruments and Administration
Describe your assessment methods, both direct and indirect, and their frequency of administration.

To standardize the scoring of each outcome, a faculty committee developed a set of rubrics for each undergraduate student learning goal. In general, three faculty members score the outcome based on the rubric in a double-blind fashion, or inter-rater reliability method, initially so that the rubrics could be proven reliable and valid measures. Once the rubrics were established, a faculty member in each degree program are assigned to measure the learning goal via an assignment in their course. Once the assignments are collected by the teaching faculty members, the results of the scoring process are collected and compiled by the Assessment and Curriculum Committee. Each outcome is measured at least bi-annually. More important than this is to have demonstrated at least one closed loop improvement process for each outcome in a 5 year period. This is described in more detail below.

6. Findings
Provide quantifiable results of direct and indirect assessments

The tables below depict the collected outcomes measurements from Fall 2012 to the Spring 2017 semesters. Note that data is not collected during each semester for adequate information to close the loop. “NC” indicates semesters where data was not necessary to be collected, and “NO” indicates semesters where the course in which data is collected was not offered.

**Oral Communication** (Target ≥ 70% satisfactory or above)

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*BUS 5980 - Business Models for Entrepreneurship and Innovation

**Written Communication** (Target ≥ 70% satisfactory or above)

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* BUS 5980 - Business Models for Entrepreneurship and Innovation

**Critical Thinking** (Target ≥ 70% satisfactory or above)

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*BUS 5980 Business Models for Entrepreneurship and Innovation; BUS 6426 Integration of Business Areas

**Teamwork** (Target ≥ 70% satisfactory or above)

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*BUS 5980 Business Models for Entrepreneurship and Innovation; BUS 6121 Teambuilding and Leadership; IST 5885 Human-Computer Interaction
Technology Proficiency (Target ≥ 70% satisfactory or above)

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*ERP 2110 Introduction to Enterprise Resource Planning; BUS 6723 Corporate Information Systems Management

7. Continuous Improvement Changes
List in narrative form the metric-drive improvements suggested from your findings. Our department looks at this process of improvement as “closing the loop.” This is documented by each faculty in a shared spreadsheet. The department seeks to measure an outcome, make a change in one or multiple courses related to improving the outcome measurement, and then measure again for the impact of the change(s). This shared Google sheet can be provided upon request. Each year faculty teaching in the degree programs meet to review outcome scores and discuss any changes or adjustments necessary. Our outcomes, and their definitions, are also reviewed and changed periodically. For each of our outcomes in the undergraduate degree programs this is demonstrated below. Please note the narrative describes the data in the tables above.

Undergraduate Communication
The overall outcome of the communication learning goal for the undergraduate population has been satisfactory. As with any process, scores have shown fluctuation, as in FS13 (written) and SP14 (oral), however, overall they have stayed above the departmental target.

As outlined in the departmental spreadsheet, faculty made changes in multiple courses including:

- BUS 4675 - International Business (SP13): Added an oral presentation as a graded assignment.
- BUS 1810 - Introduction to College Success (FS14): Included speaker to discuss interviewing skills and email correspondence.

As we continue to improve our curriculum, we hope to see continued success in achieving and exceeding our outcomes assessment goals in communication.

Undergraduate Critical Thinking
Overall, the scores for the undergraduate students exceed 70% of students scoring satisfactory. As a means to continuously improve our outcomes, and the education of our students, changes were made in multiple courses as follows:

- BUS 4675 – International Business (SP13): Added a cultural expansion paper to aid in expanding cultural literacy by expanding students’ understanding of cultural norms.
- IST 3333 - Data Networks and Information Security (FS15): Revised curriculum and exams to include a higher percentage of critical thinking exercises and questions.
- MKT 3110 - Marketing (SP14): Updated edition of the textbook, to give students the ability to have updated cases and access to the newest trends.

Thus far, scores have not changed significantly in subsequent periods. The undergraduate faculty have, therefore, discussed additional changes and continue to work on this.
Undergraduate Teamwork
We are pleased that our undergraduate students can successfully work in teams. Overall the measurements indicate that more than 70% of our students meet or exceed the satisfactory criteria for working in teams. After a blip in measurement in SP14, the following changes were made to the curriculum:

- **ERP 4641 – Customer Relationship Management in ERP Environment (F15):** Replaced creating mobile app to prototyping mobile app and then presenting the prototype to class. Creating mobile app was an individual project; prototyping mobile app was changed to group project. This gave the groups opportunity to work on a smaller project so they can learn how to communicate with each other, before working on their major project.
- **IST 5885 – Human Computer Interaction (SP16):** Assigned mini group projects so that groups can get to know each other better; also used a hybrid or blended style of teaching so that students have more time to work in teams.

Scores in subsequent semesters have improved after these changes were made. However, the undergraduate faculty also discussed ways to consistently measure teamwork throughout the curriculum and ways to communicate teamwork expectations to students. The undergraduate subcommittee continues to work on this.

Undergraduate Technology Proficiency
Our undergraduate students have exceeded the minimum target of 70% of students achieving a satisfactory or NC above score in technology proficiency.

To ensure the solidarity of our students’ education and mastery in technology, the following are examples of changes made in the curriculum for continuous improvement over the review period:

- **ERP 2110 – Introduction to Enterprise Resource Planning (SP13):** Enhanced the term project, to better reflect the overall course objectives.

The undergraduate subcommittee was also assigned the task to look into moving the outcome collection to a course with more senior students in the future.