This Program Change form will enable you to propose several types of changes to any existing program. You may propose changes to an existing program's:

- Title
- Description
- Requirements
    - Admission Requirements
    - Prerequisites
    - Required courses
    - Elective courses
    - Graduation requirements

**It is highly recommended to create a separate Word document** that includes the entire sections of the catalog you wish to change. To create the document, copy from Requirements section of this form in order to include live course links.

- In the word document, use the ~~strikethrough~~ option to denote deletions and the <u>underline</u> icon to denote added text.

-Once formatting is complete in your Word document, please paste the text in the corresponding text box.

In addition, this program change form should be used to propose a new major or track (or specialization, concentration, area of emphasis). Each of these types of programs is defined by the Board of Governors (BOG) of the State University System of Florida, in its Regulation 8.011 Academic Degree Program Coordination and Approval. These definitions are outlined in FIU Policy 350.010 Academic Degree Program Coordination and Approval.

- **Program Major**: An organized curriculum offered as part or all of an existing or proposed degree program. A major must be reasonably associated with the degree program under which it is offered and share a minimum of 15% of core courses with other majors within the same degree program. For an undergraduate degree, each major requires completion of a minimum of 30 credits (including core courses). Graduate degrees typically focus only on the specific discipline; therefore, there is no minimum credit requirement for graduate majors. There are cases where the major and degree program names are identical, thus creating only one major.
- **Program Track (or Specialization, Concentration, Area of Emphasis)**: An organized curriculum, offered as part of an individual student's degree program, which enhances or complements the degree to be awarded in a manner that leads to specific educational or occupational goals. In order

to establish some uniformity across degree programs, this level of categorization should be termed a track unless a different terminology is required for accreditation or discipline purposes. The number of credit hours of a track, specialization, concentration, or area of emphasis shall not equal or exceed the number of credit hours established for a program major at the same degree level.

Standing committees of the FIU Faculty Senate will review these changes. The members that comprise these governing bodies may not understand the nuances of your department or academic discipline. Therefore, you will be required to provide a justification for the changes you are proposing. The committees request that justifications be specific and written for an audience that is unfamiliar with your department and program.

# Bulletin

**Bulletin number**
4

# Program & Proposal Type

**Which type of program do you propose changing?**
Degree Program

**Select each type of change you are proposing to an existing program. (You may propose more than one type of change/ addition.)**
Program Requirements

# Justification

**Please provide a justification for the changes you are proposing.**
We are changing the first programming language of our IT degrees from Java to Python (note the second will remain as Java). This was done in response to studying market signals from widely cited programming language indices and long term trends. Additionally, Python is particularly well suited for an introductory programming course that emphasizes computational thinking. Compared to Java, Python offers:
•Simpler syntax and higher readability;
•A gentler learning curve for novice programmers;
•Immediate feedback and reduced early frustration;
•No exposure to manual memory management in CS1; and
•Strong relevance across modern application domains, including AI and data science.
By reducing incidental complexity, Python allows COP 2047 to better assess and develop the outcomes that matter most early in the curriculum:
•Problem decomposition;
•Algorithmic reasoning;
•Correctness, testing, and debugging habits; and
•Ethical and responsible computing practices, including AI-assisted workflows.
In addition, the Academic Progression Standard in Program Requirements is edited to clarify for students how this standard is applied.

# Effective term

Proposed program changes will become **effective Fall of the next academic year**. However, some cohort programs may require a phasing in of programmatic changes. Please provide a rationale for any circumstances requiring other than a Fall implementation date.

For example: changes submitted in 2025-26 will become effective in Fall 2026.

**Justification for Cohort programs**

-

# Questions Specific to the List of Courses Required for this Program

**If proposing additional courses, do all courses exist in the current catalog?**
Yes

**If courses are not in the current catalog, are they currently in the workflow process?**
Yes

**New Course Form**
Please submit a New Course Form for the courses you wish to propose.

**Are all courses to be added taught in the same proposing department?**
Yes

**Are courses to be deleted taught in the same proposing department?**
Yes

**If no, provide written approval/acknowledgment of the other department(s).**

-

**Does this change affect the courses measuring Student Learning Outcomes (SLOs) or Program Outcomes (POs) for the program?**
No

**Please upload your revised Student Learning Outcomes (SLOs) and/or Program Outcomes (POs).**

-

# Catalog Fields

**Current Program Title**
Bachelor of Science in Information Technology

**Proposed Program Title**

-

Instructions:

Changes to the Program Description and Program website may be made directly in the respective boxes below. These changes are visible to review using the "view changes" option on the top right. Once submitted, reviewers can view the changes using the "changes" button on the top section of the proposal.

**Program Description**

The Bachelor of Science (BS) in Information Technology prepares graduates to excel in a world increasingly focused on information technology. Students can advance their knowledge and earn one of the most in-demand bachelor's degrees with a curriculum that includes courses in software and database development, cloud computing, application deployment and management, and more. Students learn from top-ranked faculty and industry experts. The BS in Information Technology includes hands-on skill development, focusing on becoming proficient in new, innovative technologies and methodologies. Students will build technical abilities, be prepared for real-life situations, and be able to apply their extensive knowledge of industry computing techniques in the professional world—from business to government to education to non-profit organizations. The Board of Governors of the State University System of Florida has recognized FIU as a top institution for training tech talent for its innovative approaches in educating the next generation of top computing specialists. Our information technology graduates are prepared for positions that include specialties in all aspects of cloud computing, DevOps, application, and database development. With a BS in Information Technology, students will be prepared to be an information technology and development specialists in any type and size of organization in a rapidly changing worldwide technical environment.

For more information, visit the College of Engineering and Computing website.

**Proposed Program Description**

# The Bachelor of Science (BS) in Information Technology prepares graduates to excel in a world increasingly focused on information technology. Students ~~have the opportunity to~~ can advance their knowledge and earn one of the most in-demand bachelor's degrees with a curriculum that includes courses in ~~programming,~~ software ~~development, information systems,~~ and database development, ~~computer networking, operating~~

~~systems,~~ cloud computing, application deployment and management, and more. Students learn from top-ranked faculty and industry experts. The BS in Information Technology includes hands-on skill development, focusing on becoming proficient in new, innovative technologies and methodologies. Students will build technical abilities, be prepared for real-life situations, and be able to apply their extensive knowledge of ~~computers, programming, and all IT-related tasks to~~ industry computing techniques in the professional world—from business to government to education to non-profit organizations. The Board of Governors of the State University System of Florida has recognized FIU as a top institution for training tech talent for its innovative approaches in educating the next generation of top computing specialists. ~~Many of our~~ Our information technology graduates ~~have excelled in~~ are prepared for positions that include ~~systems administrators, applications support specialists, database administrators, computer programmers, computer analysts, and computer support specialists.~~ specialties in all aspects of cloud computing, DevOps, application, and database development. ~~Businesses and~~

~~organizations in every industry rely on computers and networks to create opportunities and solve challenges.~~ With ~~your~~ a BS in Information Technology, students will be prepared to be an information technology ~~specialist~~ and development specialists in any type and size of organization in a rapidly ~~expanding job market~~changing worldwide technical environment. For more information, visit the College of Engineering and Computing website.

**Program Website**
Program Website

**Proposed Program Website Change**
N/A

# Requirements

**Simple Requisites**

**Admissions Requirements**

**Admissions Requirements for the Bachelor of Science (BS) in Information Technology**

See general university admissions requirements at admissions.fiu.edu.

**Admissions Requirements for the Combined BS in Information Technology to Master of Science (MS) in Engineering Management Accelerated Degree Pathway**

Students who pursue a BS degree and are approaching their first semester of the senior year in Information Technology and have earned at least a 3.2 overall GPA may, upon recommendation from three faculty members, apply to the department to enroll in the combined BSIT/MSEM pathway. Students must also submit an online application to the University Graduate School for admission to the MSEM program. In addition to the admission requirements of the MSEM program, students must meet all the admission requirements of the University Graduate School.

Students need only apply once to the combined degree pathway the application is submitted to Graduate Admissions typically before the student starts the last 30 credits of the bachelor's degree program.

Students interested in the combined pathway should consult with their undergraduate advisor on their eligibility to the pathway, preferably during their junior year, since appropriate planning of coursework is required in order to achieve the full nine-credit benefit. The student should also meet the MSEM Program Director to learn about the graduate program and available tracks/courses before completing the application form and submitting it to their undergraduate advisor. Final decision for admission to the MSEM program will be made by the University Graduate School upon recommendation by the Engineering Management program director. Applicants will be notified by the Engineering Management Program and the University Graduate School of the decision on their applications.

**Program Requirements**

**Academic Progression Requirements**

The B.S. in Information Technology degree as a first major requires completion of prerequisite courses and required and elective courses as outlined below. All required courses must be completed with a grade of "C" or better. All students must participate in KFSCIS assessment activities and successfully complete an exit interview prior to graduation.

**Lower Division Preparation**
**Type**
Prerequisite

**Common Prerequisite Courses**

For a list of all state-approved common prerequisites, including alternatives, visit https://cpm.flvc.org.

*Consult FIU Catalog for double majors coupled with IT Programs. Students would need to take the prerequisites for the other major they select, in addition to the IT prerequisites.*

All students must have completed the following courses (or equivalent) prior to starting the Information Technology program.

**Complete ALL of the following Courses:**

- CGS1920 - Introduction to the Field of Computing
  **OR** COP1000 - Introduction to Computer Programming
  **OR** IDC1000 - Computer Science for Everyone

- CGS2060 - Introduction to Microcomputers
  **OR** CGS2100 - Intro to Microcomputer Applications for Business
  **OR** CGS2518 - Computer Data Analysis
- MAC1140 - PreCalculus Algebra
  **OR** MAC1147 - Pre-Calculus Algebra and Trigonometry
- PSY2012 - Introductory Psychology

Other Lower Division Requirements:

STA2023 Statistical Methods

**DevOps Major-specific Prerequisites**

-

**Complete ALL of the following Courses:**

- COP2250 - Java Programming
- COT3100 - Discrete Structures
  **OR** MAD1100 - Mathematics for Information Technology

-

**Software Major-specific Prerequisites**

-

**Complete ALL of the following Courses:**

- COP2210 - Programming I
- COT3100 - Discrete Structures
  **OR** MAD2104 - Discrete Mathematics

-

**Upper Division Requirements**

At least 50% of the upper division credits required for the BS in Information Technology must be taken at FIU.

**Upper Division Preparation**
**Type**
Completion Requirement

**Common Required Courses**

-

**Complete ALL of the following Courses:**

- CEN3721 - Introduction to Human-Computer Interaction
- CGS3095 - Technology in the Global Arena
- CGS3767 - Computer Operating Systems
- CGS4285 - Applied Computer Network
- CGS4854 - Website Construction and Management
- CNT4403 - Computing and Network Security
- COP4703 - Information Storage and Retrieval Concepts
- ENC3249 - Professional and Technical Writing for Computing
  **OR** ENC3213 - Professional and Technical Writing
- CIS3950 - Capstone I
- CIS4951 - Capstone II
- COP3835 - Designing Web Pages
- CIS3080 - Cloud Essentials
- CIS4526 - IT Project Management
- CIS4641 - Cloud DevOps

-

**Information Technology Electives**

Students in both majors must take information technology electives. Details for each major can be found below in the Major Requirements section. KFSCIS maintains two lists of courses for two elective groups: Application Development and System Network (https://www.cis.fiu.edu/academics/degrees/undergraduate/).

-

**Free Electives for Both Majors**

All students must complete six additional credits of general electives.

**Earn at least 6 credits**

-

**Major Requirements**

**Information Technology (IT) Major: 12 Credits**
**Type**
Completion Requirement

**IT Major-specific Required Course**

-

**Complete ALL of the following Courses:**

- COP3804 - Intermediate Java Programming

-

**IT Major-specific Electives**

Students must complete five electives courses, as follows. Select two courses from each group (four courses). Select the fifth course from either group:
https://www.cis.fiu.edu/academics/degrees/undergraduate/

-

**Software Major: 12 Credits**
**Type**
Completion Requirement

**Software Major-specific Required Courses**

-

**Complete ALL of the following Courses:**

- CDA3102 - Computer Architecture
- COP3337 - Computer Programming II
- COP3530 - Data Structures
- COP4338 - Systems Programming

-

**Software Major-specific Electives**

Students must select two elective courses from the Application Development group:
https://www.cis.fiu.edu/academics/degrees/undergraduate/

-

**Track, Specialization, Concentration, Area of Emphasis, or Other Curricular Offering Requirements**

**Other Curricular Offering: Combined BS in Information Technology to MS in Engineering Management Accelerated Degree Pathway**

A student admitted to the combined degree pathway will be considered to have undergraduate status until the student applies for graduation from their bachelor's degree program. Upon conferral of the bachelor's degree, the student will be granted graduate status and be eligible for graduate assistantships. Students enrolled in the combined degree pathway could count up to three Management Electives toward their nine "interdisciplinary credits" in the BSIT degree program, for a total saving of 9 credit hours.

--ACG6026 Actg For Managers

--EIN5359 Ind Fin Decisions

--FIN6406 Corporate Finance

--MAN6167 Ldrshp Global Env

--MAN6209 Org Design & Behav

--QMB6616 Process & Oper Analysis

--ISM6021 Mgmt Information Systems

--MAR6805 Mkg Mgt In Glob Env

The combined BSIT/MSEM pathway has been designed to be a continuous enrollment pathway. During this combined BSIT/MSEM pathway, upon completion of all the requirements of the BSIT program, students will receive their BSIT degree. Students may elect to permanently leave the combined pathway and earn only the BSIT degree. Students who elect to leave the combined pathway and earn only the BS degree will have the same access requirements to regular graduate programs as any other student but will not be able to use the 9 credit hours in both the BSIT and MSEM degrees.

For each of the graduate courses counted as credits for both BSIT and MSEM degrees, a minimum grade of "B" is required. Only graduate courses with formal lecture can be counted for both degrees. The students are responsible for confirming the eligibility of each course with their undergraduate advisors.

# Admission Requirements Changes

**Instructions**
To propose changes to existing catalog text, first select the " + Add New" button below. A text box will appear. Then, copy the existing Admissions Requirements text from the Admissions Requirements section above and paste into a Word document.

In the word document, use the strikethrough option to denote deletions and the underline icon to denote added text. Once formatting is completed, paste the formatted text into the text box below.

If there are any courses referenced as requirements for admissions, once the text is pasted into the box below, any additions should be added using the "Embed Course Link" (book icon) in the toolbar above. Click the icon. Then, search using the prefix and number of the course you wish to add. Then click "Embed Link".

If any course added displays "inactive" next to the number, please contact APA staff for assistance in reactivation. (utilize Course Activation Form)

**Changes**

-

# Program Requirement Changes

**Instructions**
To propose changes to existing catalog text, first select the " + Add New" button below. A text box will appear. Then, copy the existing Program Requirements text from the Admissions Requirements section above and paste into a Word document.

In the word document, use the strikethrough option to denote deletions and the underline icon to denote added text. Once formatting is completed, paste the formatted text into the text box below.

For additional courses, use the "Embed Course Link" (book icon) in the toolbar above. Click the icon. Then, search using the prefix and number of the course you wish to add. Then click "Embed Link".

If you are trying to add a course that has been deactivated, it must be reactivated before submission of this proposal.

Common Prerequisite Courses

For a list of all state-approved common prerequisites, including alternatives, visit https://cpm.flvc.org.

*Consult FIU Catalog for double majors coupled with IT Programs. Students would need to take the prerequisites for the other major they select, in addition to the IT prerequisites.*

All students must have completed the following courses (or equivalent) prior to starting the Information Technology program.

**Complete ALL of the following Courses:**

- ~~CGS1920 - Introduction to the Field of Computing~~
  ~~**OR**~~ COP1000 - Introduction to Computer Programming
  **OR** IDC1000 - Computer Science for Everyone
- CGS2060 - Introduction to Microcomputers
  **OR** CGS2100 - Intro to Microcomputer Applications for Business
  **OR** CGS2518 - Computer Data Analysis
- MAC1140 - PreCalculus Algebra
  **OR** MAC1147 - Pre-Calculus Algebra and Trigonometry
- PSY2012 - Introductory Psychology

Other Lower Division Requirements:

STA2023

DevOps Major-specific Prerequisites

**Complete ALL of the following Courses:**

- COP2047 – Python Programming I

  OR COP2250 - Java Programming
- COT3100 - Discrete Structures
  **OR** MAD1100 - Mathematics for Information Technology

Software Major-specific Prerequisites

**Complete ALL of the following Courses:**

- COP2047 – Python Programming I

  OR COP2210 - Programming I
- COT3100 - Discrete Structures
  **OR** MAD2104 - Discrete Mathematics

**CEC Academic Progression Standard**

~~Students who are unsuccessful in passing common pre-requisites after two attempts will be advised to change their major into an area where they can be successful. Drops after the add/drop period, which result in a DR grade, are considered an attempt in the course and count as an unsuccessful enrollment.~~

Students admitted to the program must successfully complete MAC 1147 within three academic terms, not counting summers. Students not meeting the math progression requirement will be advised to move to a program where they can be more successful.

The language below will be added in the next cycle (2027-28 catalog) replacing the above:

*Steady academic progression is expected by the College of Engineering and Computing. Students who are unsuccessful in passing common pre-requisites after two attempts will be advised to change their major into an area where they can be successful. Drops after the add/drop period, which result in a DR grade, are considered an attempt in the course and count as an unsuccessful enrollment.*

*Students must also meet the Math Progression standard of successfully completing MAC 1147 within three academic terms, not counting summers.*

Students will be redirected to a different degree program when completion of the progression standards, including the applicable math progression standard by its stated semester, is no longer feasible.

# Major Requirements

**Instructions**
This section allows you to make "changes to a current major" or propose a "new major".

To propose **changes** to the catalog information for an existing major(s):

1. Select "**Change(s) to a current major**" in the drop down below.
2. Use the "+ Add New" button and a text box will appear.
3. Copy the existing Major Requirements text from the Major Requirements section above and paste into a Word document.
4. In the word document, use the strikethrough option to denote deletions and the underline icon to denote added text. Once formatting is completed, paste the formatted text into the text box below.
5. For additional courses, use the "Embed Course Link" (book icon) in the toolbar above. Click the icon. Then, search using the prefix and number of the course you wish to add. Then click "Embed Link".

   If you are trying to add a course that has been deactivated, it must be reactivated before submission of this proposal.
6. Repeat steps 2 - 5 for each major which requires changes.

To propose a **new major(s)** in this degree program:

1. Select "**New major**" in the drop down below.
2. Use the "+ Add New" button.
3. Complete all the required fields.
4. In the Major Requirements field, provide a detailed course listing and any specifics regarding course requirements.
5. For each course, use the "Embed Course Link"(book icon) in the toolbar above. Click the icon. Then, search using the prefix and number of the course you wish to add. Then click "Embed Link".

   If you are trying to add a course that has been deactivated, it must be reactivated before submission of this proposal.
6. Repeat steps 2 - 5 for each additional new major.

**Using the drop down menu below, please select the changes you would like to make.**
Change(s) to a current major

**Change(s) to a Current Major**

**Name of Major**
-

**Changes**
N/A

**New Major(s)**

-

# Track, Specialization, Concentration, Area of Emphasis, or Other Curricular Offering Requirement

**Instructions**
This section allows you to make "Change(s) to a current Track, Specialization, Concentration, Area of Emphasis, or Other Curricular Offering Requirement" or propose a "New Track, Specialization, Concentration, Area of Emphasis, or Other Curricular Offering".

To propose **changes** to the catalog information for an existing Track, Specialization, Concentration, Area of Emphasis, or Other Curricular Offering(s):

1. Select "**Change(s) to a current Track, Specialization, Concentration, Area of Emphasis, or Other Curricular Offering Requirement**" in the drop down below.
2. Use the "+ Add New" button and a text box will appear.
3. Copy the existing text from the Track, Specialization, Concentration, Area of Emphasis, or Other Curricular Offering Requirements section above and paste into a Word document.
4. In the word document, use the strikethrough option to denote deletions and the underline icon to denote added text. Once formatting is completed, paste the formatted text into the text box below. .
5. For additional courses, use the "Embed Course Link"(book icon) in the toolbar above. Click the icon. Then, search using the prefix and number of the course you wish to add. Then click "Embed Link".

If you are trying to add a course that has been deactivated, it must be reactivated before submission of this proposal.

6. Repeat steps 2 - 5 for each offering which requires changes.

To propose a **new Track, Specialization, Concentration, Area of Emphasis, or Other Curricular Offering (s)** in this degree program:

1. Select "**New Track, Specialization, Concentration, Area of Emphasis, or Other Curricular Offering**" in the drop down below.
2. Use the "+ Add New" button.
3. Complete all the required fields.
4. In the Requirements field, provide a detailed course listing and any specifics regarding course requirements.
5. For each course, use the "Embed Course Link" (book icon) in the toolbar above. Click the icon. Then, search using the prefix and number of the course you wish to add. Then click "Embed Link".

   If you are trying to add a course that has been deactivated, it must be reactivated before submission of this proposal.
6. Repeat steps 2 - 5 for each additional new offering.

**Using the drop down menu below, please choose the changes you would like to make.**

**Change(s) to a current Track, Specialization, Concentration, Area of Emphasis, or Other Curricular Offering Requirement**

**New Track, Specialization, Concentration, Area of Emphasis, or Other Curricular Offering**

# SACSCOC Substantive Change

If you have any questions or concerns regarding SACSCOC and Substantive Change, please contact the Office of Academic Planning and Accountability.

**Will additional facilities be needed to deliver the revised program?**
No

**If so, describe the additional facilities that will be needed.**
-

**Will additional equipment be needed to deliver the revised program?**
No

**If so, describe the additional equipment that will be needed.**
-

**Will additional financial resources be needed to deliver the revised program?**
No

**If so, describe the additional financial resources that will be needed.**
-

**Will additional library/learning resources be needed to deliver the revised program?**
No

**If so, describe the additional library/learning resources that will be needed.**
-

**Will new faculty need to be hired to deliver the revised program?**
No

**If so, describe the additional faculty resources that will be needed.**
-

**Will new content be required for the revised program?**
No

**If so, select the percentage of new content for the revised program.**
-

**Will some or all of the revised program be offered at a new location geographically apart from the Modesto A. Maidique Campus (or its Engineering Center)?**
No

**If so, select the percentage of the program that will be offered at a new location.**
-

**Enter the name of the location where the revised program will be offered.**
-

**Will the revised program be offered via a different method of delivery than is currently used?**
No

**If so, by which method of delivery will the revised program be delivered?**
-

**Select the percentage of the program that will be offered via distance education (i.e., online).**
-

**Will the revised program enter into a collaborative academic arrangement that includes the initiation of a dual academic program with another institution?**
No

**If so, with which institution will you collaborate in this dual academic program?**
-

**Will the revised program enter into a contract by which an entity not eligible for Title IV funding offers 25% or more of the program (e.g., international university)?**
No

**If so, with which entity will you contract?**
-

# Supporting Documentation

**Please include additional relevant documentation.**
CCC_FriJan30.pdf

# Dependencies

# FIU Acad Plan

**fiuAcadPlan**

**Unit Cumulative Total**
120

**SAP Eligibility Percentage**
0.5