New York City College of Technology, CUNY

CURRICULUM MODIFICATION PROPOSAL FORM

This form is used for all curriculum modification proposals. See the [Proposal Classification Chart](http://openlab.citytech.cuny.edu/collegecouncil/files/2014/08/2013-10-09-Proposal_Classification_Chart.pdf) for information about what types of modifications are major or minor. Completed proposals should be emailed to the Curriculum Committee chair.

|  |  |
| --- | --- |
| **Title of Proposal** | **CET 2023 Minor Curriculum Changes** |
| **Date** | **9/14/2023** |
| **Major or Minor** | **Minor** |
| **Proposer’s Name** | **Yu Wang, Farrukh Zia, Aparicio Carranza, Ohbong Kwon** |
| **Department** | **Computer Engineering Tech** |
| **Date of Departmental Meeting in which proposal was**  **approved** | **10/9/2023** |
| **Department Chair Name** | **Sunghoon Jang** |
| **Department Chair Signature**  **and Date** |  |
| **Academic Dean Name** | **Gerarda Shields** |
| **Academic Dean Signature and**  **Date** |  |
| **Brief Description of Proposal** (Describe the modifications contained within this proposal in a succinct summary. More detailed content will be provided in the proposal body. | Modifications in this proposal include:  Updates to course Pre-requisite(s) or Pre/Co-requisite(s):   * EMT 1220, CET 3525, CET 3625, CET 4711, CET 4960, and CET 4962   Updates to Course Titles:   * CET 4705, CET4805, CET 4960, and CET 4962   Updates to Course Descriptions :   * CET4805, CET 4960, and CET 4962 |
| **Brief Rationale for Proposal** (Provide a concise summary of why this proposed change is important to the department. More detailed content will be provided in the proposal body). | The changes of pre-requisites or pre/co-requisites make sure students, especially for transfer students, are prepared for their middle- and upper-level coursework.  The modification of the course titles and descriptions will provide our students with more appropriate information on the content of the courses. Change of course title, and  course description reflects up to date industry trends. |
| **Proposal History**  (Please provide history of this proposal: is this a resubmission? An updated version? This may most easily be expressed as a list). | Initial submission was on 10/11/2023.  1st updated version was on 12/12/2023.  2nd updated version is on 3/7/2024.  This 2nd updated version reflects the followings:  (1) remove the changes of pre/co of EMT 1220 since the college has updated to MAT 1275CO or MAT 1275 in the pre/co requisites already.  (2) remove the changes to CET 4960 and CET 4962, in which changes will be included in the separate proposal to submit.  (3) verify all course codes between current and other submitted CET AAS and SET BS proposals |

Please include all appropriate documentation as indicated in the Curriculum Modification Checklist. For each new course, please also complete the New Course Proposal and submit in this document.

Please submit this document as a single .doc or .rtf format. If some documents are unable to be converted to .doc, then please provide all documents archived into a single .zip file.

**ALL PROPOSAL CHECK LIST**

|  |  |
| --- | --- |
| Completed CURRICULUM MODIFICATION FORM including: |  |
| * Brief description of proposal | X |
| * Rationale for proposal | X |
| * Date of department meeting approving the modification | X |
| * Chair’s Signature |  |
| * Dean’s Signature |  |
| Evidence of consultation with affected departments  List of the programs that use this course as required or elective, and courses that use this as a prerequisite. | N/A |
| Documentation of Advisory Commission views (if applicable). | N/A |
| Completed [Chancellor’s Report Form.](http://openlab.citytech.cuny.edu/collegecouncil/files/2014/08/2013-10-09-Chancellor_Report_Quick_Reference_Guide1.doc) | X |

**EXISTING PROGRAM MODIFICATION PROPOSALS**

|  |  |
| --- | --- |
| Documentation indicating core curriculum requirements have been met for new programs/options or program changes. | N/A |
| Detailed rationale for each modification (this includes minor modifications) | X |

## CET Minor Curriculum Changes and Rationale in 2023

This proposal indicates the Computer Engineering Technology Department to change some of EMT and CET major course descriptions, course titles, course prerequisites and pre/corequisites.

The changes of Prerequisites or Pre/corequisites make sure students, especially for transfer students, are prepared for their middle- and upper-level coursework. The modification of the course titles and descriptions will provide our students with more appropriate information on the content of the courses. Change of course title and course description reflects up to date industry trends.



A thick orange line indicates recent changes of prerequisites or pre/corequisites.

The changes will streamline the educational pathway and allow transfer students to take 15 credits or more each semester. Refer to CET BTech Degree Map for transfer students from MEC AAS of LaGuardia Community College. This program has an articulation agreement to CET BTech program of NYCCT.

A screenshot of a computer screen

Description automatically generated

CET BTech Degree Map for the transfer students from MEC AAS of LaGuardia Community college

## Changes to Existing Courses CET3525 (Electrical Networks) (Prof. Wang and Prof. Kwon)

**CURRENT COURSE PRE/COREQUISITE(S)**: MAT 1575 or higher

**UPDATED COURSE PREREQUISITE:** EMT 1255

**UPDATED COURSE PRE/COREQUISITE:** MAT1575 or higher

Rationale: The change of prerequisites makes sure students, especially transfer students, are prepared for their middle- and upper-level coursework. It will eliminate the mistake of registering CET3525 without the background of the electronics and electrical circuits. The course sequence was advised by faculty advisor in the past.

Note: The code of EMT 1255 in current EMT AAS program will be the code of CET 2350 in the new CET AAS program. The new program of SET (BS in Software Engineering Technology) does not require this course. The course or course code is not associated with SET program.

## Changes to Existing Courses CET 4711 (Computer Controlled System Design) (Prof. Wang and Prof. Zia)

The current CET 4711 prerequisites and pre/co-requisites are as follows:

**CURRENT COURSE PREREQUISITE** : CET 3640

**CURRENT COURSE PRE/COREQUISITE** : CET4705

**UPDATED COURSE PRE/COREQUISITES:** CET 3640 and CET 4705

Rationale: Experience in the class showed that students can be successful when taking CET3640 as a pre-requisite or co-requisite instead of a pre-requisite and brought the class in line with new sequence with CET3640. The changes make sure students, especially transfer students, are prepared for their middle- and upper-level coursework and reduce the number of overrides required each semester.

Note: The new program of SET (BS in Software Engineering Technology) does not require the courses of CET3640 and CET4705. These course codes and pre/co requisites are not associated with SET program.

## Changes to Existing Courses CET 3625 (Applied Analysis Laboratory) (Prof. Wang and Prof. Kwon)

The current CET 3625 prerequisites and pre/co-requisites are as follows:

# CURRENT COURSE PRE/COREQUISITE: MAT 2680

**UPDATED COURSE PRE/COREQUISITE:** MAT 2680

**UPDATED COURSE PREREQUISITE:** CET 3525

Rationale: The content taught in CET 3525 prepares students to study CET 3625. The course sequence with CET 3625 and CET 3525 was advised by faculty advisor in the past.

The changes make sure students, especially transfer students, are prepared for their middle- and upper-level coursework. It will eliminate the mistake to register CET3625 without the background of CET 3525.

Note: The new program of SET (BS in Software Engineering Technology) does not require the courses of CET3525 and CET3615. These course codes and pre/co requisites are not associated with SET program.

## Changes to Existing Courses CET 4705 (Component and Subsystem Design I) (Prof. Wang and Prof. Kwon)

**UPDATED COURSE CODE AND TITLE:** CET 4705 - Component and Subsystem Design

Rationale: CET 4705 course name is modified from “Component and Subsystem Design I” to “Component and Subsystem Design,” since CET 4805 course name is proposed to be changed from “Component and Subsystem Design II” to “Digital System Design Using HDL”.

## Changes to Existing Courses CET 4805 – Component and Subsystem Design II (Prof. Wang and Prof. Kwon)

The current and updated course title, description, prerequisites for CET 4805 is presented below:

**CURRENT COURSE CODE AND TITLE:** CET 4805 - Component and Subsystem Design II

**CURRENT COURSE DESCRIPTION:** Continuation of CET 4705. Further design of systems requiring solution by differential equations. Worst-case designs and component tolerances, development of control systems.

**CURRENT COURSE PREREQUISITES**: CET4705

**UPDATED COURSE CODE AND TITLE:** CET 4805 - Digital System Design Using HDL

# UPDATED COURSE DESCRIPTION:

Introduce theory and modern design methodologies that allow complex digital systems to be rapidly designed, verified, and implemented using a hardware description language (HDL) and programmable ICs. Topics include coding for different levels of abstraction,

implementation of combinational and sequential circuits and finite state machines, hierarchical designs, reusable component design, design constraints and verification. Contemporary CAD tools and target digital technologies including Field Programmable Gate Arrays (FPGAs) are utilized.

Rationale: The proposed change in the course description aims to provide students with relevant, practical, and up-to-date skills in digital system design, aligning the curriculum with current industry needs and technological trends. This shift ensures that graduates are well- prepared to make meaningful contributions in the rapidly evolving field of digital engineering and embedded systems.

## Section AV: Changes in Existing Courses

**Changes to be offered in the Computer Engineering Technology Department**

|  |  |  |  |
| --- | --- | --- | --- |
| **CUNYFirst Course ID** | 0376475 | | |
| **Course Number** | CET3525 Electrical Networks | | |
| **FROM:** |  | **TO:** |  |
| **Department(s)** |  | **Department(s)** |  |
| **Course Number** |  | **Course Number** |  |
| **Course Title** |  | **Course Title** |  |
| **Prerequisite** |  | **Prerequisite** | EMT 1255 |
| **Corequisite** |  | **Corequisite** |  |
| **Pre- or corequisite** | ~~MAT 1575 or higher~~ | **Pre- or corequisite** | MAT 1575 or higher |
| **Hours** |  | **Hours** |  |
| **Credits** |  | **Credits** |  |
| **Description** |  | **Description** |  |
| **Requirement** |  | **Requirement** |  |
| **Liberal Arts** | [ ] Yes [x ] No | **Liberal Arts** | [ ] Yes [x ] No |
| **Course Attribute** |  | **Course Attribute** |  |
| **(e.g. Writing** | **(e.g. Writing** |
| **Intensive, Honors,** | **Intensive, Honors,** |
| **etc** | **etc** |
|  | [x ] Major | sit**C**y**ourse Applicability** | [x ] Major |
|  | [ ] Gen Ed Required | [ ] Gen Ed Required |
|  | [ ] English Composition | [ ] English Composition |
|  | [ ] Mathematics | [ ] Mathematics |
|  | [ ] Science | [ ] Science |
|  | [ ] Gen Ed - Flexible | [ ] Gen Ed - Flexible |
| **Course Applicability** | [ ] World Cultures  [ ] US Experience in its Diver [ ] Creative Expression | [ ] World Cultures  [ ] US Experience in its [ ] Creative Expression |
|  | [ ] Individual and Society | [ ] Individual and Socie |
|  | [ ] Scientific World | [ ] Scientific World |
|  | [ ] Gen Ed - College Option | [ ] Gen Ed - College Opti |
|  | [ ] Speech | [ ] Speech |
|  | [ ] Interdisciplinary | [ ] Interdisciplinary |
|  | [ ] Advanced Liberal Arts | [ ] Advanced Liberal Ar |
| **Effective Term** | Fall 2024 |  |  |

Diversity

ty on

ts

## Rationale:

The change of prerequisites makes sure students, especially transfer students, are prepared for their middle- and upper-level coursework. It will eliminate the mistake of registering CET3525 without the background of the electronics and electrical circuits. The course sequence was advised by faculty advisor in the past.

Note: The code of EMT 1255 in current EMT AAS program will be the code of CET 2350 in the new CET AAS program. The new program of SET (BS in Software Engineering Technology) does not require this course. The course or course code is not associated with SET program.

## Section AV: Changes in Existing Courses

**Changes to be offered in the Computer Engineering Technology Department**

|  |  |  |  |
| --- | --- | --- | --- |
| **CUNYFirst Course ID** | 037656 | | |
| **Course Number** | CET 4711 Computer Controlled System Design | | |
| **FROM:** |  | **TO:** |  |
| **Department(s)** |  | **Department(s)** |  |
| **Course Number** |  | **Course Number** |  |
| **Course Title** |  | **Course Title** |  |
| **Prerequisite** | ~~CET 3640~~ | **Prerequisite** |  |
| **Corequisite** |  | **Corequisite** |  |
| **Pre- or corequisite** | ~~CET 4705~~ | **Pre- or corequisite** | CET 3640 and CET 4705 |
| **Hours** |  | **Hours** |  |
| **Credits** |  | **Credits** |  |
| **Description** |  | **Description** |  |
| **Requirement** |  | **Requirement** |  |
| **Liberal Arts** | [ ] Yes [x ] No | **Liberal Arts** | [ ] Yes [x ] No |
| **Course Attribute** |  | **Course Attribute** |  |
| **(e.g. Writing** | **(e.g. Writing** |
| **Intensive, Honors,** | **Intensive, Honors,** |
| **etc** | **etc** |
|  | [x ] Major | sit**C**y**ourse Applicability** | [x ] Major |
|  | [ ] Gen Ed Required | [ ] Gen Ed Required |
|  | [ ] English Composition | [ ] English Composition |
|  | [ ] Mathematics | [ ] Mathematics |
|  | [ ] Science | [ ] Science |
|  | [ ] Gen Ed - Flexible | [ ] Gen Ed - Flexible |
| **Course Applicability** | [ ] World Cultures  [ ] US Experience in its Diver [ ] Creative Expression | [ ] World Cultures  [ ] US Experience in its [ ] Creative Expression |
|  | [ ] Individual and Society | [ ] Individual and Socie |
|  | [ ] Scientific World | [ ] Scientific World |
|  | [ ] Gen Ed - College Option | [ ] Gen Ed - College Opti |
|  | [ ] Speech | [ ] Speech |
|  | [ ] Interdisciplinary | [ ] Interdisciplinary |
|  | [ ] Advanced Liberal Arts | [ ] Advanced Liberal Ar |
| **Effective Term** | Fall 2024 |  |  |

Diversity

ty on

ts

## Rationale:

Experience in the class showed that students can be successful when taking CET3640 as a pre-requisite or co-requisite instead of a pre-requisite and brought the class in line with new sequence with CET 3640. The changes make sure students, especially transfer students, are prepared for their middle- and upper-level coursework and reduce the number of overrides required each semester.

## Section AV: Changes in Existing Courses

**Changes to be offered in the Computer Engineering Technology Department**

|  |  |  |  |
| --- | --- | --- | --- |
| **CUNYFirst Course ID** | 037652 | | |
| **Course Number** | CET 3625 Applied Analysis Laboratory | | |
| **FROM:** |  | **TO:** |  |
| **Department(s)** |  | **Department(s)** |  |
| **Course Number** |  | **Course Number** |  |
| **Course Title** |  | **Course Title** |  |
| **Prerequisite** |  | **Prerequisite** | CET 3525 |
| **Corequisite** |  | **Corequisite** |  |
| **Pre- or corequisite** | ~~MAT 2680~~ | **Pre- or corequisite** | MAT 2680 |
| **Hours** |  | **Hours** |  |
| **Credits** |  | **Credits** |  |
| **Description** |  | **Description** |  |
| **Requirement** |  | **Requirement** |  |
| **Liberal Arts** | [ ] Yes [x ] No | **Liberal Arts** | [ ] Yes [x ] No |
| **Course Attribute** |  | **Course Attribute** |  |
| **(e.g. Writing** | **(e.g. Writing** |
| **Intensive, Honors,** | **Intensive, Honors,** |
| **etc** | **etc** |
|  | [x ] Major | sit**C**y**ourse Applicability** | [x ] Major |
|  | [ ] Gen Ed Required | [ ] Gen Ed Required |
|  | [ ] English Composition | [ ] English Composition |
|  | [ ] Mathematics | [ ] Mathematics |
|  | [ ] Science | [ ] Science |
|  | [ ] Gen Ed - Flexible | [ ] Gen Ed - Flexible |
| **Course Applicability** | [ ] World Cultures  [ ] US Experience in its Diver [ ] Creative Expression | [ ] World Cultures  [ ] US Experience in its [ ] Creative Expression |
|  | [ ] Individual and Society | [ ] Individual and Socie |
|  | [ ] Scientific World | [ ] Scientific World |
|  | [ ] Gen Ed - College Option | [ ] Gen Ed - College Opti |
|  | [ ] Speech | [ ] Speech |
|  | [ ] Interdisciplinary | [ ] Interdisciplinary |
|  | [ ] Advanced Liberal Arts | [ ] Advanced Liberal Ar |
| **Effective Term** | Fall 2024 |  |  |

Diversity

ty on

ts

## Rationale:

The content taught in CET 3525 prepares students to study CET 3625. The course sequence with CET 3625 and CET 3525 was advised by faculty advisor in the past.

The changes make sure students, especially transfer students, are prepared for their middle- and upper-level coursework. It will eliminate the mistake of registering CET 3625 without the background of CET 3525.

## Section AV: Changes in Existing Courses

|  |  |  |  |
| --- | --- | --- | --- |
| **CUNYFirst Course ID** | 037655 | | |
| **Course Number** | CET 4705 Component and Subsystem Design I | | |
| **FROM:** |  | **TO:** |  |
| **Department(s)** |  | **Department(s)** |  |
| **Course Number** |  | **Course Number** |  |
| **Course Title** | Component and Subsystem Design I | **Course Title** | Component and Subsystem Design |
| **Prerequisite** |  | **Prerequisite** |  |
| **Corequisite** |  | **Corequisite** |  |
| **Pre- or corequisite** |  | **Pre- or corequisite** |  |
| **Hours** |  | **Hours** |  |
| **Credits** |  | **Credits** |  |
| **Description** |  | **Description** |  |
| **Requirement** |  | **Requirement** |  |
| **Liberal Arts** | [ ] Yes [x ] No | **Liberal Arts** | [ ] Yes [x ] No |
| **Course Attribute** |  | **Course Attribute** |  |
| **(e.g. Writing** | **(e.g. Writing** |
| **Intensive, Honors,** | **Intensive, Honors,** |
| **etc** | **etc** |
|  | [x ] Major | sit**C**y**ourse Applicability** | [x ] Major |
|  | [ ] Gen Ed Required | [ ] Gen Ed Required |
|  | [ ] English Composition | [ ] English Composition |
|  | [ ] Mathematics | [ ] Mathematics |
|  | [ ] Science | [ ] Science |
|  | [ ] Gen Ed - Flexible | [ ] Gen Ed - Flexible |
| **Course Applicability** | [ ] World Cultures  [ ] US Experience in its Diver [ ] Creative Expression | [ ] World Cultures  [ ] US Experience in its [ ] Creative Expression |
|  | [ ] Individual and Society | [ ] Individual and Socie |
|  | [ ] Scientific World | [ ] Scientific World |
|  | [ ] Gen Ed - College Option | [ ] Gen Ed - College Opti |
|  | [ ] Speech | [ ] Speech |
|  | [ ] Interdisciplinary | [ ] Interdisciplinary |
|  | [ ] Advanced Liberal Arts | [ ] Advanced Liberal Ar |
| **Effective Term** | Fall 2024 |  |  |

**Changes to be offered in the Computer Engineering Technology Department**

Diversity

ty on

ts

## Rationale:

CET 4705 course name is modified from “Component and Subsystem Design I” to “Component and Subsystem Design,” since CET 4805 course name is proposed to be changed from “Component and Subsystem Design II” to “Digital System Design Using HDL”.

**Section AV: Changes in Existing Courses**

## Changes to be offered in the Computer Engineering Technology Department

|  |  |  |  |
| --- | --- | --- | --- |
| **CUNYFirst Course ID** | 037660 | | |
| **Course Number** | CET 4805 Component and Subsystem Design II | | |
| **FROM:** |  | **TO:** |  |
| **Department(s)** |  | **Department(s)** |  |
| **Course Number** |  | **Course Number** |  |
| **Course Title** | Component and Subsystem Design II | **Course Title** | Digital System Design Using HDL |
| **Prerequisite** |  | **Prerequisite** |  |
| **Corequisite** |  | **Corequisite** |  |
| **Pre- or corequisite** |  | **Pre- or corequisite** |  |
| **Hours** |  | **Hours** |  |
| **Credits** |  | **Credits** |  |
| **Description** | ~~Continuation of CET 4705.~~ ~~Further design of systems~~ ~~requiring solution by~~ ~~differential equations.~~  ~~Worst-case designs and~~ ~~component tolerances,~~ ~~development of control~~ ~~systems.~~ | **Description** | Introduce theory and modern design methodologies that allow complex digital systems to be rapidly designed, verified, and implemented using a hardware description language (HDL) and programmable ICs.  Topics include coding for different levels of abstraction, implementation of combinational and sequential circuits and finite state machines, hierarchical designs, reusable component design, design constraints and verification.  Contemporary CAD tools and target digital technologies including Field Programmable Gate Arrays (FPGAs) are utilized. |
| **Requirement** |  | **Requirement** |  |
| **Liberal Arts** | [ ] Yes [x ] No | **Liberal Arts** | [ ] Yes [x ] No |
| **Course Attribute (e.g. Writing Intensive, Honors,**  **etc** |  | **Course Attribute (e.g. Writing Intensive, Honors,**  **etc** |  |

versity

|  |  |  |  |
| --- | --- | --- | --- |
|  | [x ] Major |  | [x ] Major |
|  | [ ] Gen Ed Required |  | [ ] Gen Ed Required |
|  | [ ] English Composition |  | [ ] English Composition |
|  | [ ] Mathematics |  | [ ] Mathematics |
|  | [ ] Science |  | [ ] Science |
|  | [ ] Gen Ed - Flexible |  | [ ] Gen Ed - Flexible |
| **Course Applicability** | [ ] World Cultures  [ ] US Experience in its Di [ ] Creative Expression | ve**C**r**o**si**u**ty**rse Applicability** | [ ] World Cultures  [ ] US Experience in its Di [ ] Creative Expression |
|  | [ ] Individual and Society |  | [ ] Individual and Society |
|  | [ ] Scientific World |  | [ ] Scientific World |
|  | [ ] Gen Ed - College Option |  | [ ] Gen Ed - College Option |
|  | [ ] Speech |  | [ ] Speech |
|  | [ ] Interdisciplinary |  | [ ] Interdisciplinary |
|  | [ ] Advanced Liberal Arts |  | [ ] Advanced Liberal Arts |
| **Effective Term** | Fall 2024 |  |  |

## Rationale:

The proposed change in the course description aims to provide students with relevant, practical, and up-to-date skills in digital system design, aligning the curriculum with current industry needs and technological trends. This shift ensures that graduates are well-prepared to make meaningful contributions in the rapidly evolving field of digital engineering and embedded system.