

Rochester INSTITUTE OF TECHNOLOGY

Minor Program proposal form

College of Applied Science

and Technology

**Department of Civil Engineering Technology, Environmental Management and Safety**

**Name of Minor:** Structural Design

**Brief description of the minor to be used in university publications**

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| The Structural Design minor will broaden the learning experiences and professional opportunities of non-Civil Engineering Technology majors by creating a focus in structural design and analysis of steel and concrete structure. It also introduced related design codes. This minor is designed to most readily accommodate students with a mechanical engineering technology or mechanical engineering preparation. |

**1.0 Minor Program Approvals**

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| --- | --- | --- |
|  | Approval request date: | Approval granted date: |
| Academic Unit Curriculum Committee | 1-22-2012 | 1-22-2012 |
| College Curriculum Committee |  |  |
| Inter-College Curriculum Committee |  |  |

**2.0 Rationale:**

A minor at RIT is a related set of academic courses consisting of no fewer than 15 semester credit hours leading to a formal designation on a student's baccalaureate transcript

How is this set of academic courses related?

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| The courses in this minor represent the full structural design sequence and related electives offered in RIT’s Civil Engineering Technology BS program. Students are introduced to the elements of structures and structural analysis and then move on to steel and concrete design. Student can then choose to expand this background to include timber design or move on to applied design in bridges and masonry structures. |

**3.0 Multidisciplinary involvement:**

If this is a multidisciplinary minor spanning two or more academic units, list the units and their role in offering and managing this minor.

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| N/A |

**4.0 Students ineligible to pursue this minor:**

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| Students in RIT’s Civil Engineering Technology BS Program are ineligible for this minor. This minor is designed to most readily accommodate students with a mechanical engineering technology or mechanical engineering preparation. |

**5.0 Minor Program Structure, Sequence and Course Offering Schedule:**

Describe the structure of the proposed minor and list all courses, their anticipated offering schedule, and any prerequisites.

Narrative of Minor Program Structure:

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| Students are introduced to the elements of structures and structural analysis and then move on to steel and concrete design. Student can then choose to expand this background to include timber design or move on to applied design in bridges and masonry structures.  This minor consists of 16 semester credit hours; it is a discipline-based minor which includes one 200-level, one 300-level and three 400-level courses. All courses are offered at least once each year. |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| Course Number & Title | SCH | Required | Optional (elective) | Fall | Spring | Annual/Biennial | Prerequisites |
| CAST-CVET-230  Elementary Structures | 3 | X |  |  | X | A | CVET-220 or equivalent |
| CAST-CVET-330  Struct. Anal & Dynamics | 4 | X |  | X |  | A | CVET-220 |
| CAST-CVET-431  Structural Design - Steel | 3 | X |  | X |  | A | CVET-330 |
| CAST-CVET-432  Structural Design – Reinforced Concrete | 3 | X |  |  | X | A | CVET-330 |
| CAST-CVET-433  Structural Timber Design | 3 |  | X | X |  | A | CVET-330 |
| CAST-CVET-434  Design of Highway Bridges |  | X |  | X | A | CVET-330, 431, 432 |
| CAST-CVET-435 Prestressed Concrete |  | X |  | X | A | CVET-330 |
| CAST-CVET-436  Masonry Structures |  | X | X |  | A | CVET-330 |
| Total credit hours: | 16 | | | | | | |

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| Name of Minor in Semester Calendar: | Structural Design |
| Name of Minor in Quarter Calendar: | Structural Design |
| Name of Certifying Academic Unit: | Civil Engin. Tech., Envir. Mgmt. and Safety |

| QUARTER: Current Minor Courses | | | SEMESTER: Converted Minor Courses | | |  |
| --- | --- | --- | --- | --- | --- | --- |
| Course # | Course Title | QCH | Course # | Course Title | SCH | Comments |
| 0608-380 | Elementary Structures | 4 | CAST-CVET-230 | Elementary Structure | 3 |  |
| 0608-490 | Structural Analysis | 4 | CAST-CVET-330 | Structural Analysis & Dynamics | 4 |  |
| 0608-497 | Structural Steel Design | 4 | CAST-CVET-431 | Structural Design - Steel | 3 |  |
| 0608-496 | Reinforced Concrete Design | 4 | CAST-CVET-432 | Structural Design – Reinforced Concrete | 3 |  |
| 0608-470 | Timber Design | 4 | CAST-CVET-433 | Structural Timber Design | 3 |  |

**Minor Course Conversion Table: Quarter Calendar and Semester Calendar Comparison**