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| **Fecha:** | **Ciudad:** |

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| **1. informaciÓn personal ESTUDIANTE USTA** | | |
|  | **Programa:** | |
| **Nombre:** | **Código:** |
| **Documento de Identificación No:** | **Apellido:** Maldonado Mendez |
| **Dirección Residencia:** | **Tipo: T.I. C.C. C.E.** |
| **Teléfono celular 1:** | **Teléfono:** |
| **Teléfono celular 2:** | **Correo electrónico:** |

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| **2. información de la empresa** | |
| **Nombre:** | **Representante legal:** |
| **Dirección:** | **Municipio:** |
| **Teléfono:** | **Fax:** |
| **Correo electrónico:** |  |

|  |  |
| --- | --- |
| **3. información del tutor de la empresa** | |
| **Nombre:** | **Cargo:** |
| **Teléfono:** | **Celular:** |
| **Dirección:** | **Correo electrónico** |
| **Horario disponible para atender visita de la universidad:** | |

|  |  |
| --- | --- |
| **4. información del director del proyecto** | |
| **Nombre:** | **Celular:** |
| **Teléfono:** | **Correo electrónico:** |

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| **5. información deL TRABAJO DE GRADO** |
| **Modalidad de trabajo de grado:**  **Creación de empresas \_\_\_\_ Mejoramiento empresarial \_\_\_\_ Investigación \_\_\_**  **¿Práctica empresarial \_\_\_\_ Estudio de maestría \_\_\_\_ Otra\_\_\_\_ Cuál? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |
| **Nombre del trabajo de grado:** |
| **Objetivo General:** |
| **Objetivos específicos:**  . |
| **Actividades por desarrollar: (Enumerarlas)** |
| **Horario de trabajo de las estudiantes en la empresa:** |

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| **Cronograma de actividades:**(Diagrama de Gantt con fechas)   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **CRONOGRAMA DE ACTIVIDADES** | | | | | | | | | | | | | | | | | | | | | | | | | | | | Objetivo General | Determinar el comportamiento mecánico mediante el ensayo de resistencia a la compresión de concreto adicionado con cementante reutilizado proveniente de escombros de la construcción. | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | MESES | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | 2 | | | | 3 | | | | 4 | | | | 5 | | | | 6 | | | | | | **ETAPA 1** | Revisión Bibliográfica. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |  |  | | | **ETAPA 2** | Adquisición de material (Escombro). |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |  |  | | | **Objetivo Específico** | Establecer el módulo de finura de un cementante obtenido de escombros de construcción que permita ser usado para la fabricación de concreto convencional. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |  |  | | | **ETAPA 3**  Actividades | Selección del escombro. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |  |  | | | Trituración del escombro. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |  |  | | | Cálculo del módulo de finura del cementante. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |  |  | | | **Objetivo Específico** | Definir la proporción más adecuada de cemento Portland y cementante procedente de escombros de construcción con base en la resistencia a la compresión del material. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |  |  | | | **ETAPA 4**  Actividades | Elaboración del diseño de mezcla y proporciones del cemento portland/material cementante. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |  |  | | | Fabricación de muestras de concreto. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |  |  | | | **ETAPA 5** | Evaluación de muestras de concreto mediante resistencia a la compresión. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |  |  | | | **Objetivo Específico ETAPA 6** | Determinar el efecto del uso de un cementante proveniente de escombros de construcción sobre la resistencia a la compresión del concreto convencional mediante análisis estadístico inferencial. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |  |  | | | **ETAPA 7** | Escritura del informe final. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |  |  | | |