

**Indian Institute of Technology Guwahati**  
**Proposal for a New Course/ Revision of a Course**

|  |   |
|--|---|
| Course Number & Title: BM 666H & Quality Management and Control  |   |
| L-T-P-C: 4-0-0-4   |   |
| Type of Letter Grading (Regular Letter Grades / PP or NP Letter Grades): Regular Letter Grades   |   |
| Kind of Proposal (New Course / Revision of Existing Course): New Course  |   |
| Offered as (Compulsory / Elective): Elective   |   |
| Offered to: Masters of Business Administration (MBA)   |   |
| Offered in (Odd/ Even / Any): Any  |   |
| Offered by (Name of Department/ Center): School of Business  |   |
| Pre-Requisite: NIL   |   |
| Preamble / Objectives (Optional):<br><br><i>Course Content/ Syllabus (as a single paragraph if it is not containing more than one subject. Sub-topics/ Sections may be separated by commas(.). Topics may be separated by Semi-Colons(;). Chapters may be separated by Full-Stop(.). While starting with broad heading, it may be indicated with Colon symbol before the topics. For example: Multi-variable Calculus: Limits of functions, Continuity, .....)</i>   |   |
| Overview of quality control: quality dimensions, philosophy, define measure analyze improve and control problem solving process; Basic statistical models for quality control; Statistical inference in quality control and improvement; Control charts for variables and attributes; Process and measurement system capability analysis; Cusum and exponential weighted moving average charts; Advanced process control charts; Lot by lot acceptance sampling for attributes; Acceptance sampling by variables; Multivariate statistical inference; Multivariate statistical process control for process monitoring: chi-square control charts; T-square control charts, interpretation of out of control signals. |   |
| Books (In case UG compulsory courses, please give it as "Text books" and "Reference books". Otherwise give it as "References".)  |   |
| Texts: (Format: Authors, <i>Book Title in Italics font</i> , Volume/Series, Edition Number, Publisher, Year.)  |   |
| 1.   | Montgomery, D. C., <i>Introduction to Statistical Quality Control</i> , 5 <sup>th</sup> Edition, Wiley, 2004. |
| 2.   | Muirhead, R. J., <i>Aspects of Multivariate Statistical Theory</i> , Springer, Wiley, 1982.                   |