

**SYLLABUS OF THE LECTURES IN  
ENGINEERING AT THE OWENS  
COLLEGE. TOGETHER WITH A SERIES OF  
EXAMPLES RELATING TO THE VARIOUS  
SUBJECTS INCLUDED IN THE COURSE**

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Syllabus of the lectures in engineering at the Owens college. Together with a series of examples relating to the various subjects included in the course by Osborne Reynolds & J. B. Millar

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**OSBORNE REYNOLDS & J. B. MILLAR**

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ENGINEERING SYLLABUS,  
WITH EXAMPLES.

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**OWENS COLLEGE, 1874-75.**

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*The Syllabus of the Lectures in Engineering is sold in London by  
Messrs. E. & F. N. Spon, 48 Charing Cross.*

SYLLABUS  
OF THE  
LECTURES IN ENGINEERING  
AT  
THE OWENS COLLEGE

GIVEN BY  
**OSBORNE REYNOLDS,**  
CIVIL ENGINEER; M.A.; FELLOW OF QUEENS' COLL. CAMB.; PROFESSOR OF CIVIL AND  
MECHANICAL ENGINEERING IN THE OWENS COLL., MANCHESTER; HON.  
SEC. TO THE LIT. AND PHIL. SOCIETY, MANCHESTER, ETC. ETC.

TOGETHER WITH  
A SERIES OF EXAMPLES  
RELATING TO THE VARIOUS SUBJECTS INCLUDED IN THE  
COURSE.

ARRANGED BY  
**J. B. MILLAR,**  
CIVIL ENGINEER; B.E., BELFAST; ASSISTANT LECTURER IN ENGINEERING  
IN THE OWENS COLLEGE, MANCHESTER.



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## INTRODUCTION.

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ENGINEERING has been so recently introduced among the subjects systematically taught in Colleges and Universities, that the system of teaching it is only now beginning to assume a definite shape; and as yet there is no well-arranged text-book such as those which furnish great help in the teaching of the older and more thoroughly systematized subjects.

It is hoped that this Syllabus will in some measure bridge over the difficulty by enabling the students of Owens College to form some idea of the range and nature of the work which lies before them, as well as by assisting them in arranging their notes and saving their time in the Classes. The examples are inserted in juxtaposition to the subjects to which they primarily relate, so that the students may obtain from them a clue to the particular object of each part of the course.

*The Course of Instruction in Engineering is given in five Classes, called generally:—*

1. The First Year's Engineering Class.
2. The Second Year's Class.
3. The Third Year's Class.
4. The Geometrical and Mechanical Drawing Class.
5. The Practical Surveying Class.

And in addition to the Lectures on Geometrical Drawing, the students have a Course of Practical Instruction in Drawing, comprising :—

1. The drawing of parts of machines from given dimensions.
2. The making of maps and sections of tracts of country from surveyors' note-books.
3. The use of Geometrical Drawing in arranging and designing the parts of machines, and how to work out various mechanical problems by the Graphic Method.
4. The taking out of quantities, and the forming estimates from drawings.
5. The designing of bridges, machines, and engineering structures generally.
6. The intersection of surfaces, and the representation of objects in skew projection and perspective.

An additional Course of Lectures, treating more fully of the elementary part of Practical Geometry, is given by Mr. Mular.

*The instruction in Practical Surveying comprises :—*

1. The surveying of a tract of country with the chain only, and the method of keeping the note-book.
2. The use of the level-instrument.
3. The surveying by angular measurements, and the use of the theodolite.
4. The ranging of curves, and the setting out of works on the ground from designs on the map.

The subjects treated of in the Lectures to the various Classes are indicated in the following Syllabus, in which the course described is nearly the same as that which has been followed during the Session 1874-75, and which has been adopted after seven years' experience of the requirements and ability of the Students. It is not, however, intended either that the course of instruction shall be limited to that set down in the Syllabus or that all the subjects here set down shall necessarily be introduced into the Lectures should further experience show the desirability of alterations.