

Google Classroom as a Learning Management System



Workshop Handout

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1.0 What is a Learning Management System (LMS)?

A **learning management system**, (LMS) is a software that is designed specifically to create, distribute, and manage the delivery of educational content. The LMS can be hosted as a stand-alone product on the institution server, or it can be a cloud-based platform that is hosted by the software firm.

Think of a learning management system as technology that can improve learning, make it faster, productive, cost-effective, and what is more important – trackable.

The most basic LMS contains a core functional platform that enables teachers to upload learning content, deliver lessons to students, serving notifications, and share data with authorized users [1].

1.1 Key benefits of a LMS

The general benefits of learning management systems include [1]:

- **Access learning on the go**
Easy accessibility via any mobile device to capture opportunities for learning
- **Use a variety of learning materials**
Bringing together learning materials from a wide range of sources, from the internet to user-shared materials
- **Analyze learning patterns**
Analytics that provide a progress report of every user and proof of knowledge
- **Learning Automation**
Automation of learning processes, including scheduling, invitations, and follow-up support

1.2 Google Classroom as a LMS

LMSs can be of several types, namely, **Open source** – generally free, online based, does not need IT staff; **Free license** – free but IT staff needed, programming experience is required; **Paid license** – requires monthly or yearly subscription, typically offer more advanced support options and user-friendly features.

Google Classroom (GCR) is a free service that allows teachers to connect with learners online. Anyone with a Google account can use this service. Teachers can create and manage online classes, upload study material, create and grade assignments, and share feedback and grades. Students can use this service to access and use learning material, interact with the teacher and other learners, submit their assignments and receive feedback and grades. Administrators can create multiple classes in their domain, assign teachers and students to these classes and keep track of the work in the classes their domain.

2.0 Online teaching-learning in KUET

Due to Covid-19 pandemic, KUET had to hold in abeyance all the face-to-face academic activities from third week of March, 2020. After almost four months, KUET academic body had decided to conduct online lectures on a trial basis for two weeks from 12 July to 23 July, 2020. The primary goals of these two weeks were:

- Get accustomed to **online teaching-learning** (OTL) systems
- Find out the strengths and weaknesses of particular departments regarding OTL
- Get feedback from both teachers and students regarding OTL
- Identify technical infrastructure needed to support long term OTL at individual departments

Though most of the teachers started to conduct lectures using **Zoom**, soon it was realized that **Zoom** is a good application for communication only. However, **Zoom** fails measurably when it comes to systematically create and manage online courses, upload study material, create and grade assignments, and share feedback and grades. The way out of this situation lies in adaptation of a LMS for OTL in KUET. This workshop is a way forward toward that adaptation process.

Furthermore, **The Academic Council** of KUET took some remarkable decisions at its 70th meeting about conducting online classes. In counting total attendance of a student, 30% weightage will be given to online classes, and 70% weightage will be given physical classes as shown in Fig. 1. One third (20 marks) of class test marks can be assigned to students from online assignments and quizzes, and the rest of the marks can be assigned from traditional class tests conducted face-to face. Moreover, a common user friendly LMS will be adapted to conduct online assessment. A guideline is given to prepare a tentative academic calendar for this term as shown in Fig. 2.

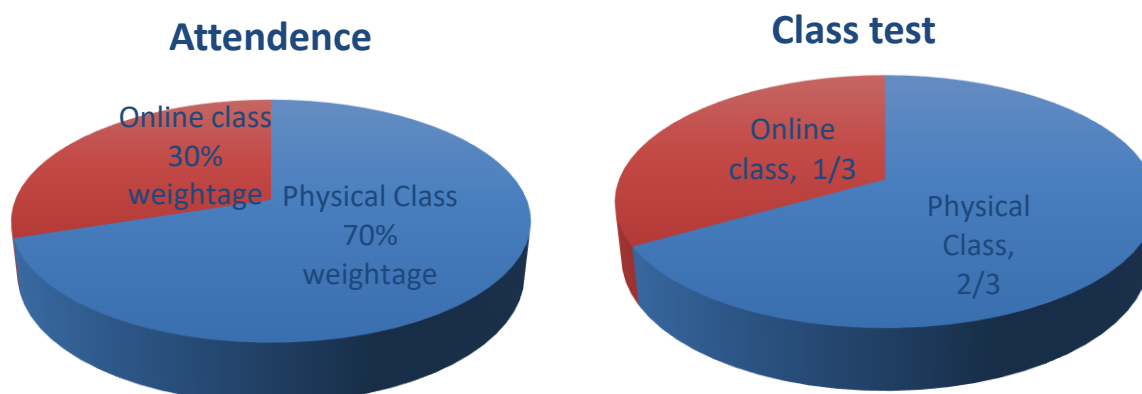


Fig. 1 Decision of the Academic council on attendance and class test

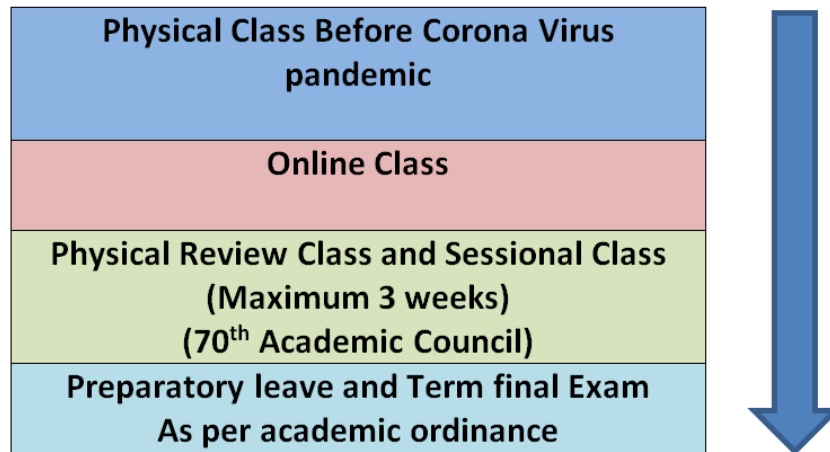


Fig. 2 Tentative Academic Calendar for this term

2.1 Experience of Google Classroom in ESE department

The **Department of Energy Science and Engineering (ESE)** with the consensus of all the departmental teachers and students adopted **Google Classroom** as a LMS even in the OTL trial weeks and received appreciation from the students as it enabled them access and use learning material, interact with the teacher and other learners, submit their assignments and receive feedback with ease.

2.2 A tentative teaching-learning ecosystem for KUET

As head of the department requires overseeing courses that are offered by a department, he/she should be connected to all the online courses offered by the department. This can be done in two ways:

1. Head of the department launches all the courses offered online using Google Classroom as an administrator and add teachers to respective courses. The head can use a separate email account (for example, e-learning@ese.kuet.bd for ESE department) with the help of KUTE IT staff to perform this task. The advantage of this process is that the head can oversee all the courses with fullest control. However, the downside is that as a Gmail account has **35GB** cloud storage limit, a single Gmail account may run out of space while dealing with all the courses for individual batches.
2. The other approach is to give the responsibility to course teachers to launch his/her courses and add the head of the department as a co-teacher. The positive side of this approach is that individual teachers will have greater control of the material being shared and stored for respective courses. The teacher can archive this own courses and reuse all the materials when the same courses would be offered in the

future. Moreover, the head can oversee the courses without storing any course material.

In Fig. 3, a tentative OLT ecosystem for KUET is mentioned that resulted from the experience gained by the ESE department during trial weeks. In order to perform online classes smoothly, teachers would interact with the students through this ecosystem. At the heart of system resides **Google Classroom**, which is a free and easy to use LMS. **Zoom** or **Google Meet** (Google Meet is an inherent part of Google Classroom) can be used to conduct live classes. In order to take quizzes, send emails, or perform office work, a whole suite of free Google apps are available such as forms, docs, sheets, slides, gmail, and calendar.

One feedback that has been received from students is that they want the lectures recorded so that those can be viewed later at their convenience. However, the issue of data storage comes into play for recorded lectures. In order to solve this problem, the head of **ESE** department has decided to upload the lectures on a separate YouTube channel and make the lectures videos private so that only concerned teachers and students can watch them. Hence, YouTube is added in the ecosystem.

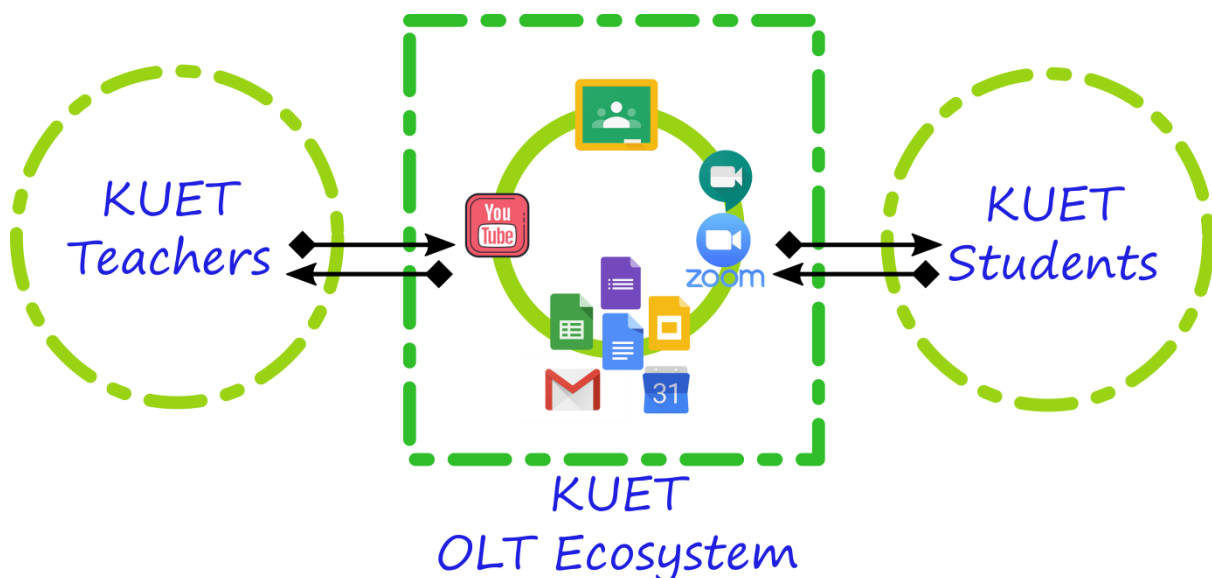


Fig 3. Tentative Ecosystem for OTL in KUET

3.0 Tutorial on Google Classroom

In this section of the document, we will delve deep into Google Classroom. To make things easy, the tutorial is arranged in a way that it raises a question about a task and then answers it with required steps to follow with necessary figures.

3.1 How to login?

Use your academic gmail (for example, monjur@ese.kuet.ac.bd) to login. Please, do not use personal gmail.

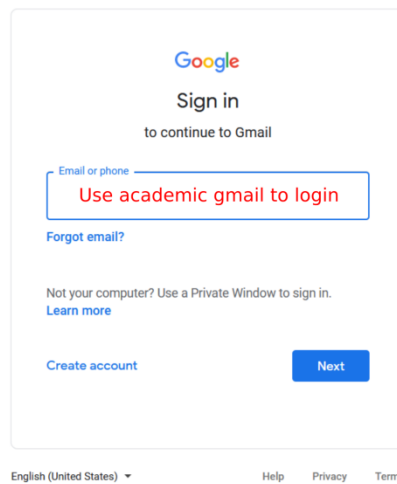


Fig 4. Login with academic gmail

3.2 Here to find Google Classroom?

Once you are logged in, use the waffle button to access Google's apps. Scroll down to select Google Classroom; see Fig 5.

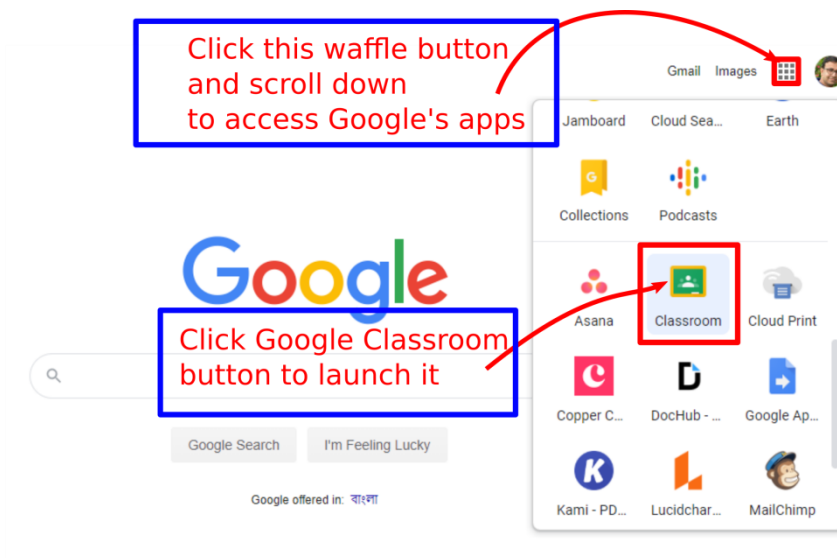


Fig 5. Access Google Classroom

Once Google Classroom is selected it will notify you to select continue and ask your intended role. Select your role as a teacher. See Fig. 6.

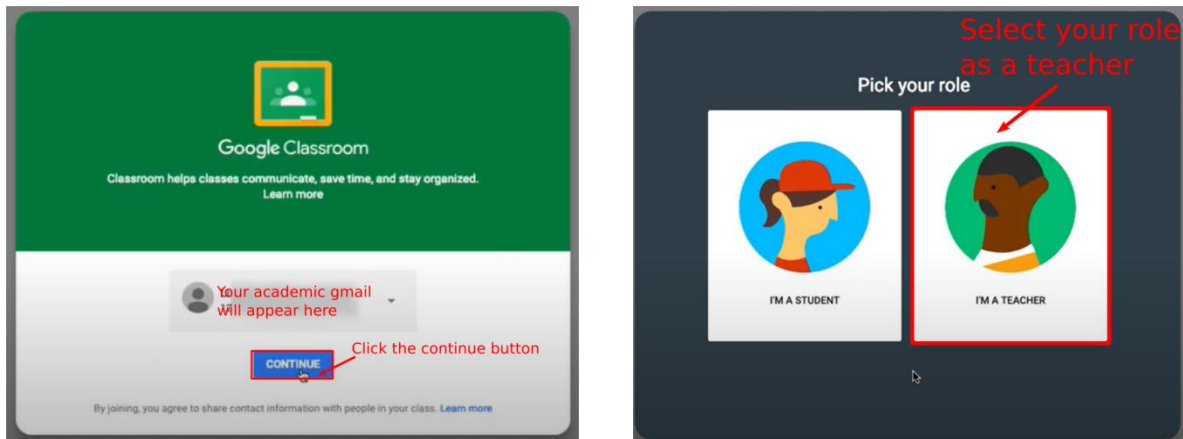


Fig. 6 Continue to use GCR and select your role as teacher

3.3 How to create a course?

After selecting your role as a teacher, you are good to launch new courses. Select the plus icon on the right top corner of GCR and select 'Create class' to create a new course. See following Fig. 7 familiarize with the interface.

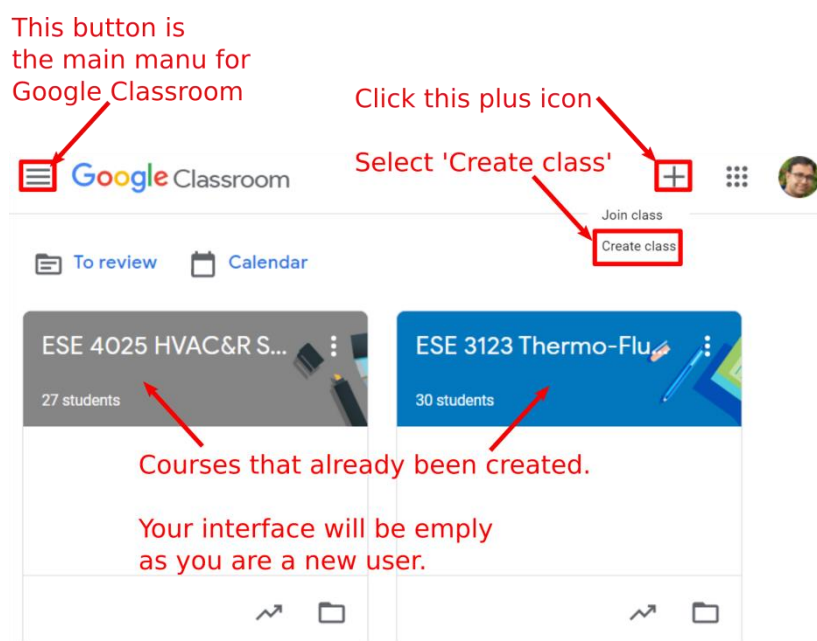


Fig. 7 Creating new courses

A window, as in Fig. 8, will appear once 'Create class' is clicked. Provide course name, for example – ESE 3105 Heat and Mass Transfer (2020). A good practice would be to use course code with course name and the year. It will help the teacher further down the road if Covid-19 crisis persists. Click 'create' and wait for few seconds; a new window will appear as

shown in Fig. 9. It is important to note that once you create a course, a folder with the course name will be created in your Google Drive.

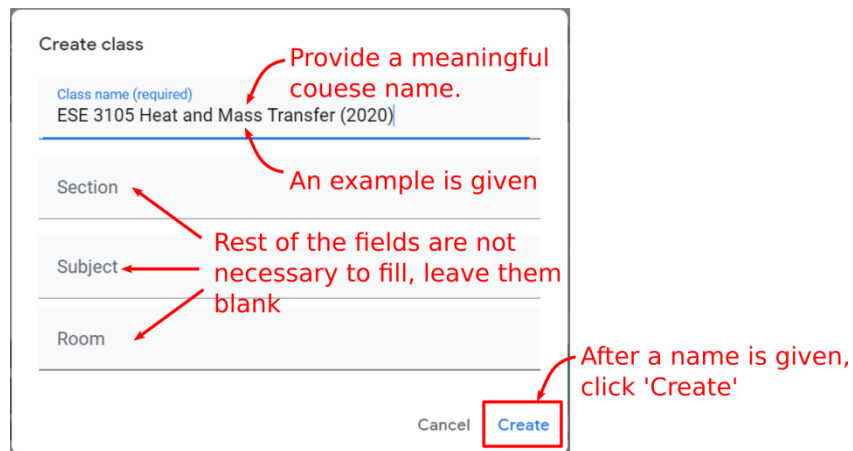


Fig. 8 Provide course name and create a course

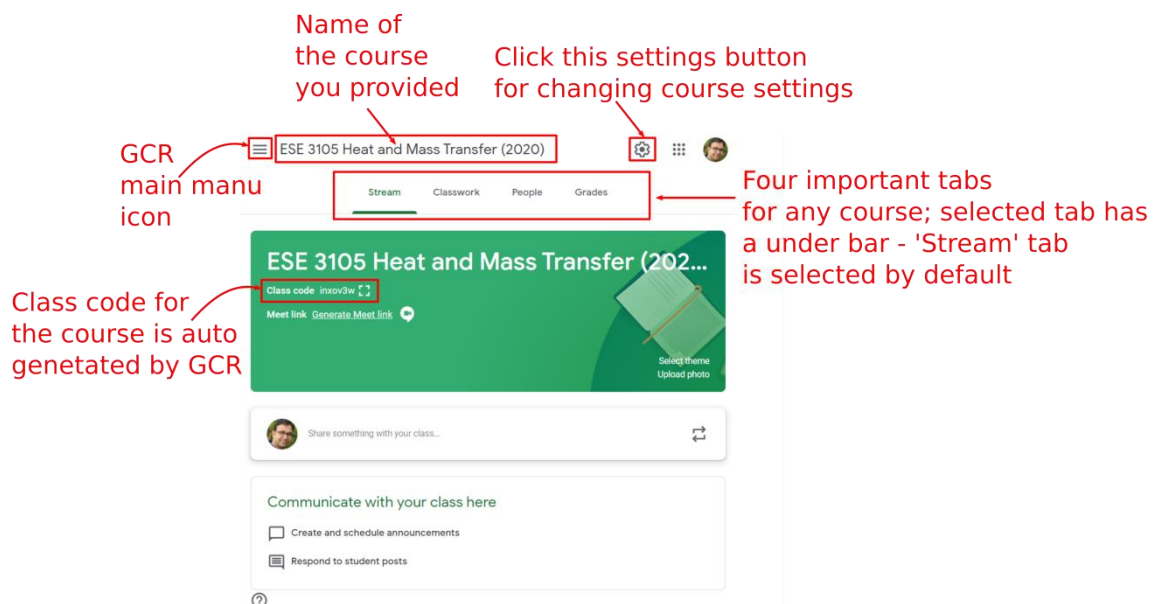


Fig. 9 Provide course name and create a course

3.4 Principle tabs of a course and their uses

Every course consists of four important tabs, namely – **Stream**, **Classwork**, **People**, and **Grades** (see Fig. 8). Whenever one enters in a course, by default **Stream** tab remains activated. In **Stream** one finds **Class code**, **Class Meet link** (if generated), and a place to make **announcements**.

Among all these tabs, **Classwork** is the most important tab. Here teacher will upload study materials, assignments and quizzes, organize a course according to syllabus and curriculum. Details of the tab will be discussed later in this document.

3.5 How to invite teachers and students to a course?

In order to invite teachers and students one needs to go to **People** tab. It is important to note that as we are using GCR using KUET's domain, it will neither allow teachers or students with personal gmail account. The gmail account has to reside in KUET's domain.

It is advisable that before inviting students, a department should collect all the student gmail addresses provided by the KUET IT staffs and distribute that to the course teachers of that department.

Fig. 10 shows the process for inviting teachers (department head or co-teacher of a course) and students.

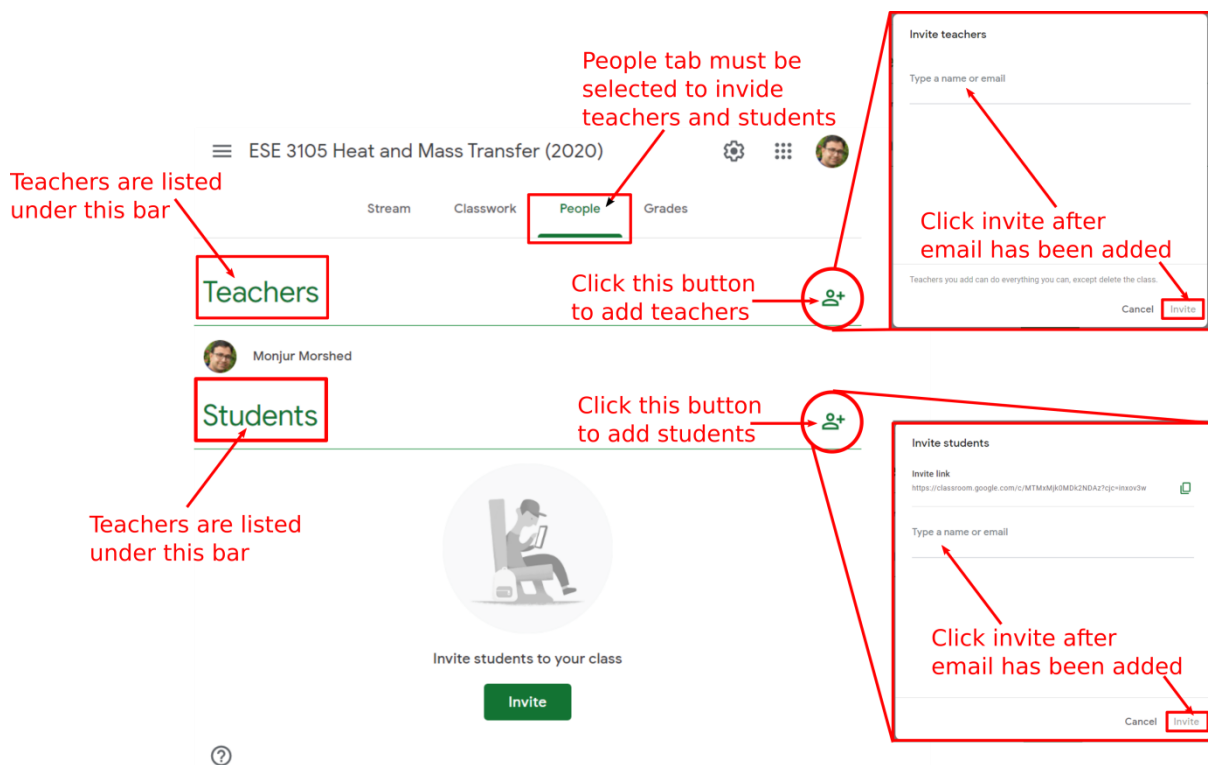


Fig. 10 Inviting teachers and students

3.6 How to create Google Meet link for a course?

Though most of the teachers use **Zoom** for conducting live lectures, **Google Meet** offers a better alternative in this regard. **Google Meet** is an integral part of GCR. A teacher creates a **Google Meet** link for a particular course once and that link will remain for that course for rest of the time. Clicking that link will launch a meeting room where only the invited students will be able to enter. The experience of using **Zoom** and **Google Meet** is almost same.

In order to create a **Google Meet** link for a particular course, go to **Stream** tab of that course and click on the **Meet Link** hyperlink. A new dialogue box will appear where you need to

click **Get Meet Link** option (see Fig. 11). After generating the link, a teacher can control whether students can see the link or not.

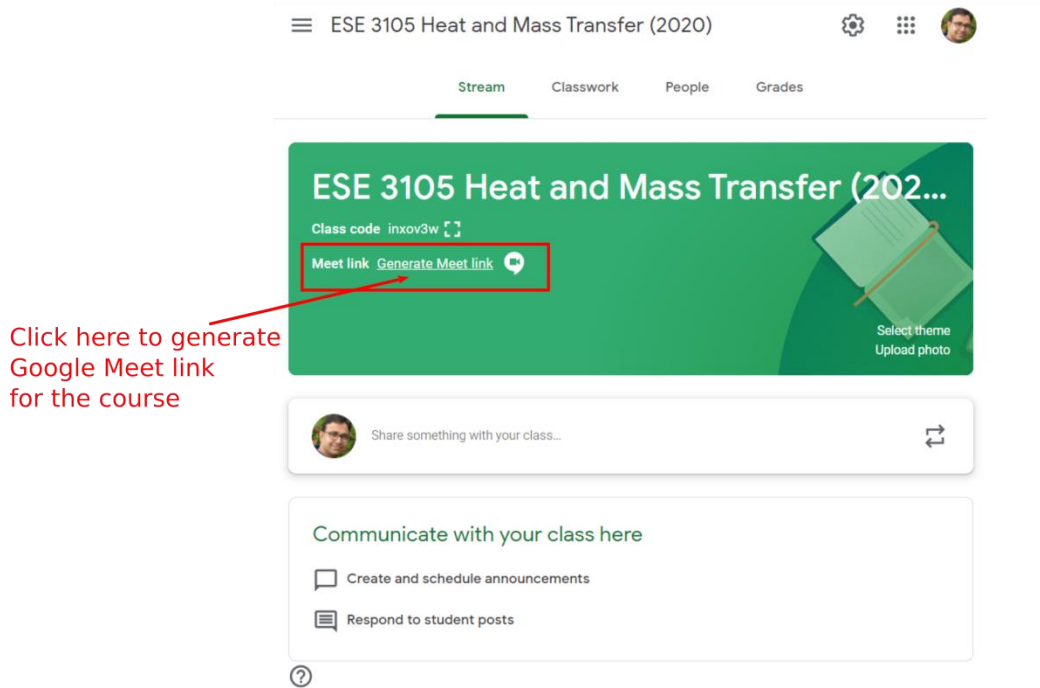


Fig. 11 Generating Meet Link for the course

3.7 Announcement of Zoom meeting in Google classroom

Initially a meeting has to be scheduled in the **Zoom** application for a particular class as shown in Fig. 11. Please check the recurring meeting option and **Google Calendar** option in the schedule.

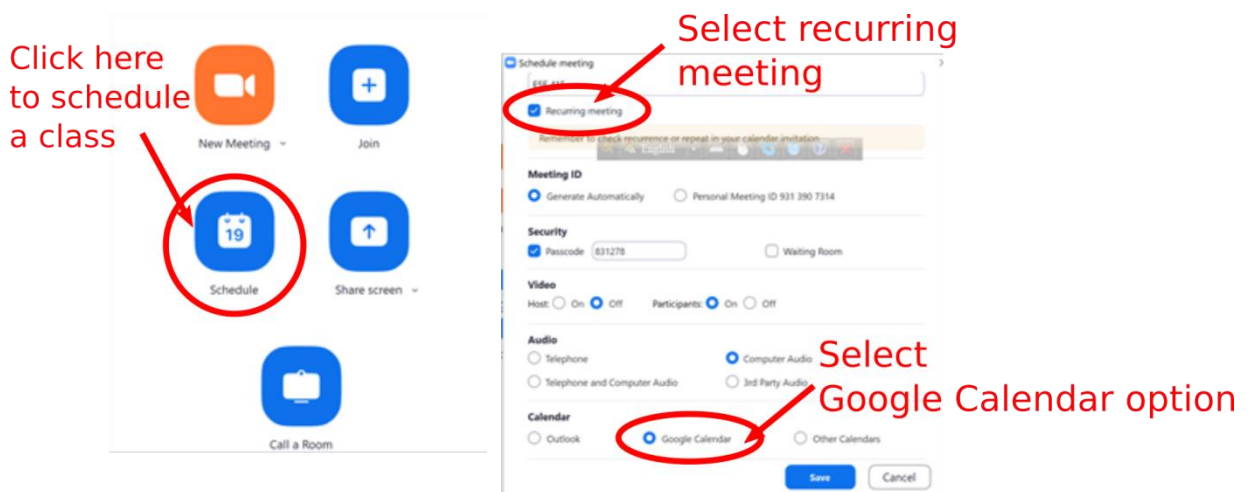


Fig. 11 Schedule a meeting in Zoom

After scheduling a meeting, you can announce the meeting information in GCR in two ways. Firstly, you can give a post direct in your classroom as shown in Fig. 12, or you can integrate it with **Google Calendar**.

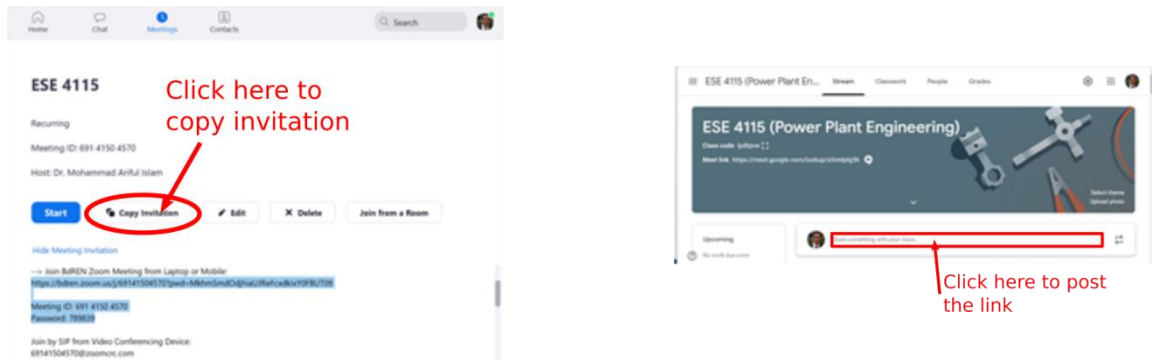


Fig. 12 Copy meeting invitation and post on GCR

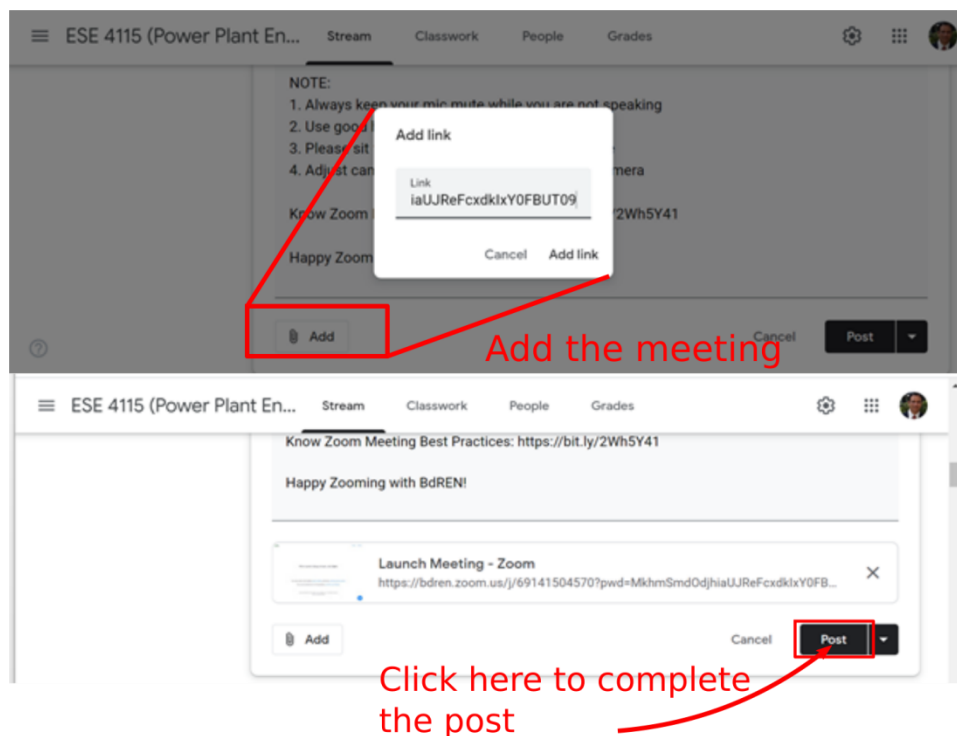


Fig. 13 Final post the meeting invitation in Google classroom

To integrate with **Google Calendar**, firstly you have to give access zoom to your Google account as shown in Fig 14. Then you have to assign the meeting announcement to your Google classroom through calendar. Also, you can assign recurring schedule of your class as shown in Fig. 15. The student can see the zoom meeting announcement through Google classroom and calendar as shown in Fig. 16.

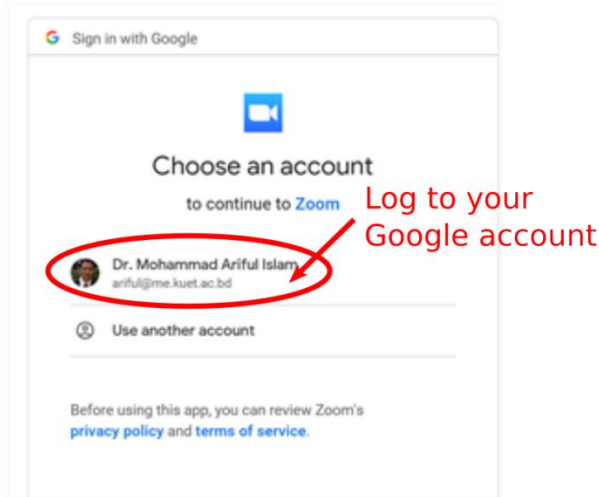


Fig. 14 Give access Zoom to your Google account

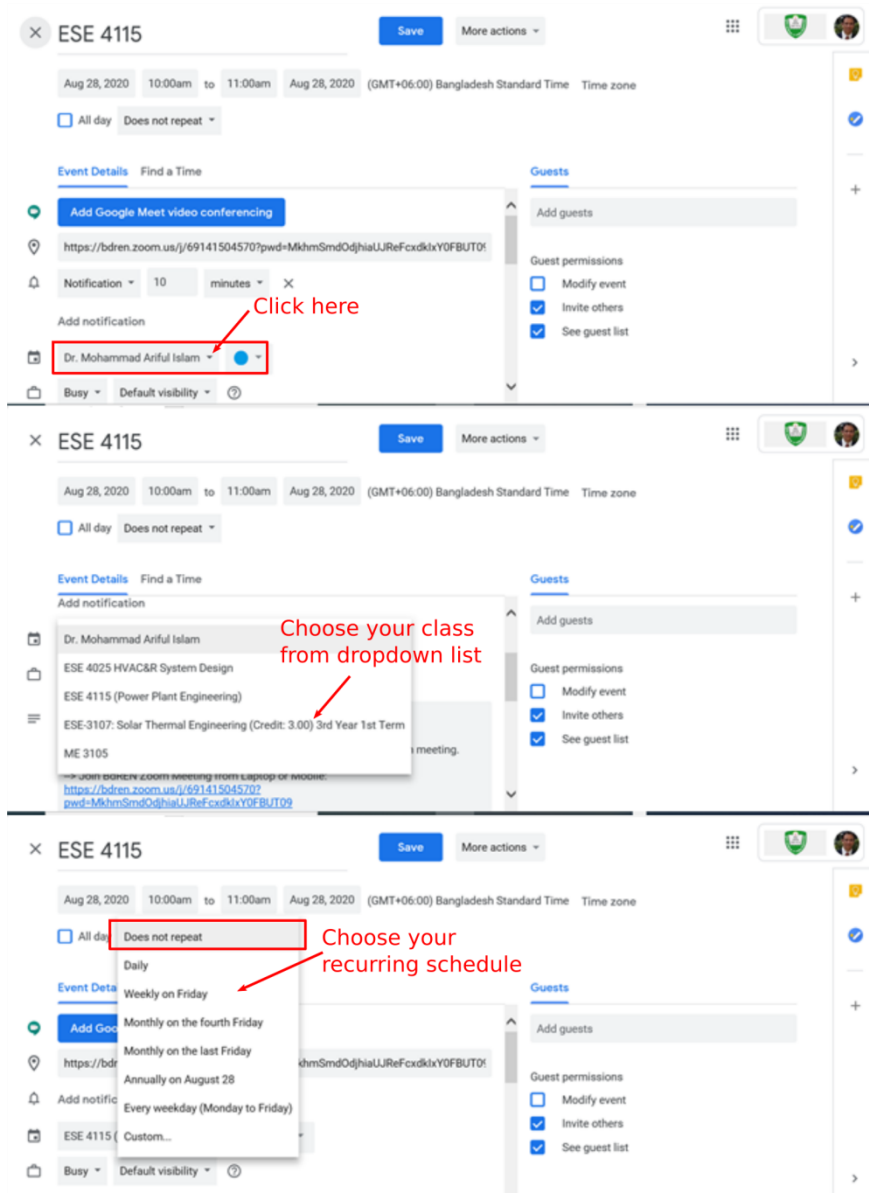


Fig. 15 Add notification to Google Classroom

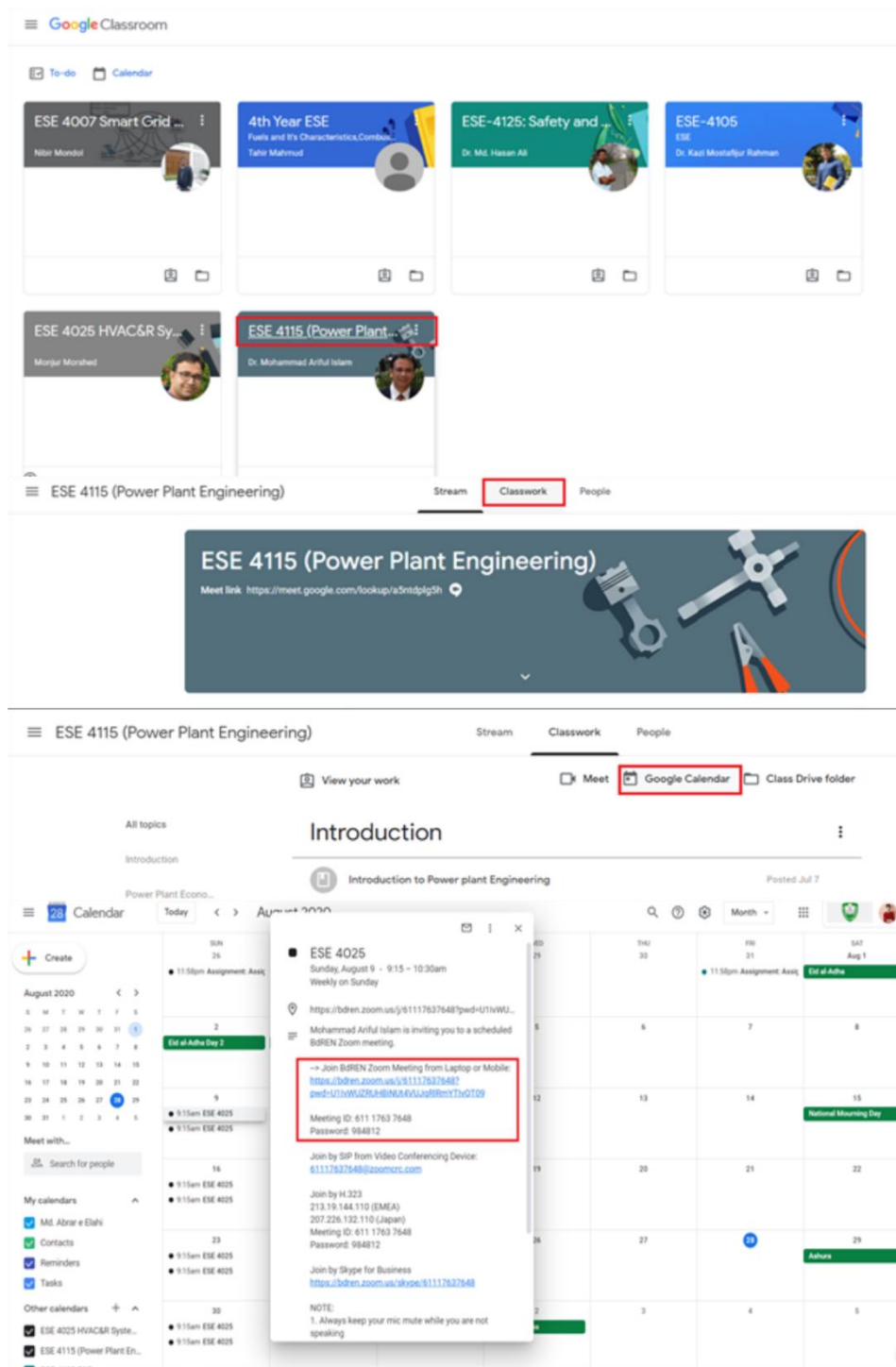


Fig. 16 Student view of the Google classroom

3.8 Important functionality of 'Classwork' tab

The **Classwork** tab is the most important for a teacher for organizing his/her course contents. By clicking '+Create' button you can create assignments, quiz assignments, ask question to students, upload study materials, and create topics (see Fig. 11).

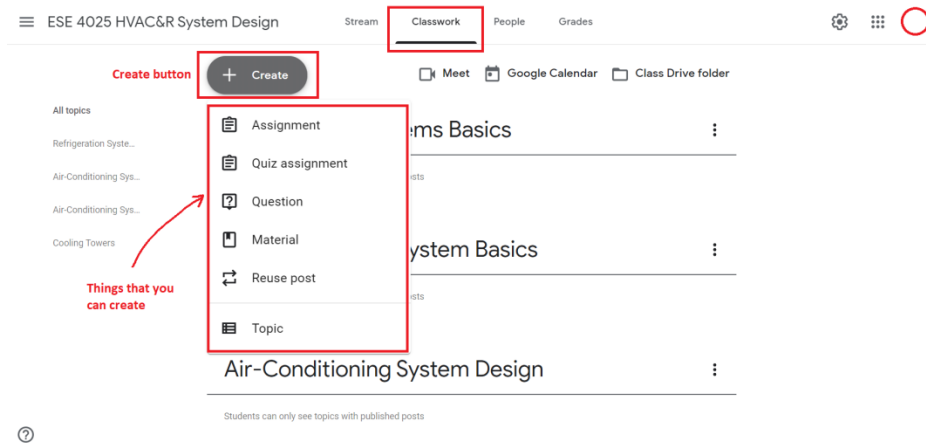


Fig 11 Creating contents in **Classwork** tab

3.8.1 How to create and arrange topics according to course syllabus?

It is advisable that you should create topics first; click the '+Create' button and select 'Topic'. In that way every material you upload can be arranged in an orderly fashion by assigning it under a topic as we will later. Your course syllabus can help to create the topic titles. For example, all the major titles in ESE 4025 are taken from the syllabus book (see Fig. 12).

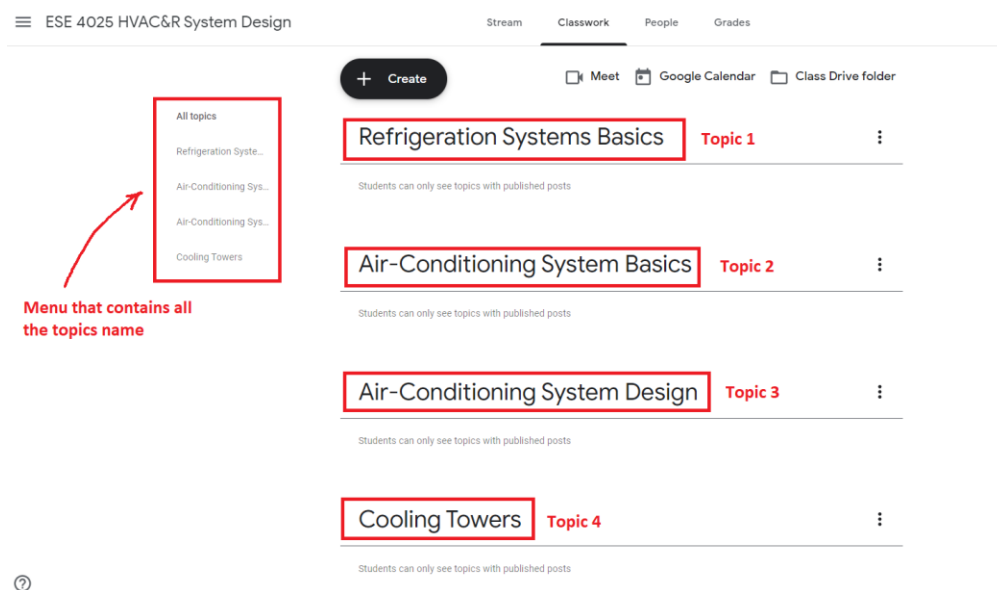


Fig 12 Create **Topics** according to course syllabus

3.8.2 How to upload study materials?

Click '+Create' button and select 'Material'. A new page, as shown in Fig. 13, will appear. Every 'Material' that you create must have a title. You can write an optional description of

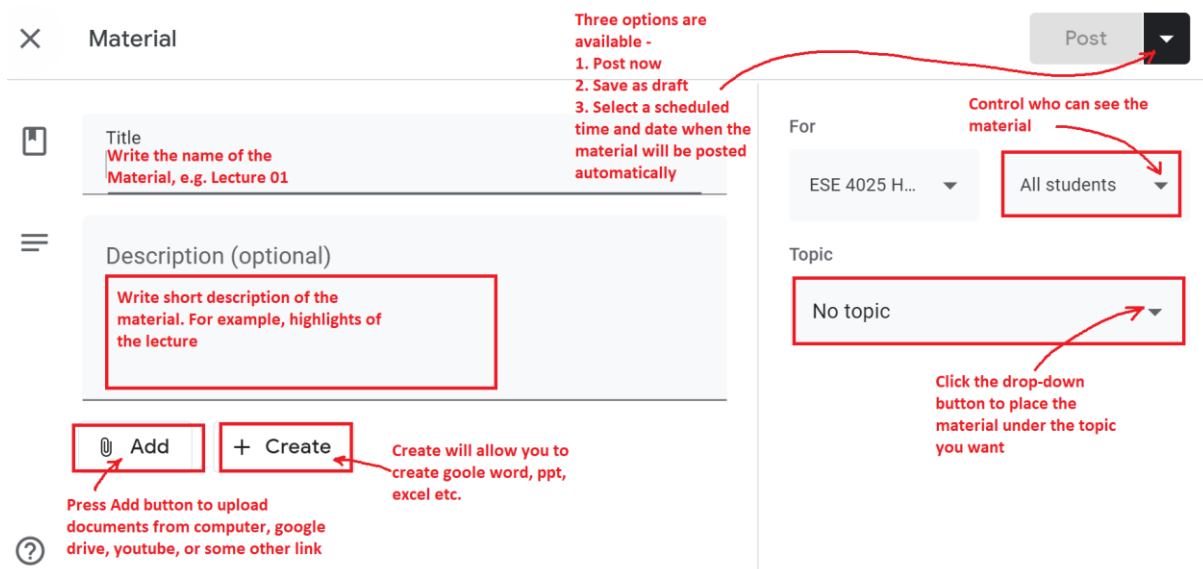


Fig. 13 Details of materials upload

the material too. By clicking 'Add' button you can upload (.pdf, .doc, .ppt, .xlsx etc), videos, YouTube videos, link to specific site. By clicking 'Create' button you will be able to launch any of the Google's Office applications, namely, Google Form, Doc, Sheet, Slide, Draw.

On the right side of the 'Material' page there are some important options that control how can see the material, the topic under which the material would be placed, time and date at which the material would be available to users etc.

3.8.3 How to use 'post', 'schedule', and 'save as draft' options?

On the top right corner the 'Material' page, there are three options available with a dropdown button. These options are: **Post or Assign**, **Schedule**, and **Save as draft**.

Once you **Add** or **Create** material it will not become available to your intended users unless you click the '**Post**' button on the top right corner. Once the material is posted, a notification will appear on the **Stream** tab to notify all that a new material has been uploaded. On the **Classwork** tab that material will be become available under the topic you have selected and will be ready to the students and teachers to access.

The **Schedule** options vary interesting. By using this option, you will be able to fix the time and date when the material would be posted automatically by GCR. This option allows teachers to schedule the course material, assignments, quizzes etc. way before the lectures begin.

If you **Save** the material, it will not be posted rather it will be saved as draft to which you can go back to and perform necessary edit (see Fig. 14).

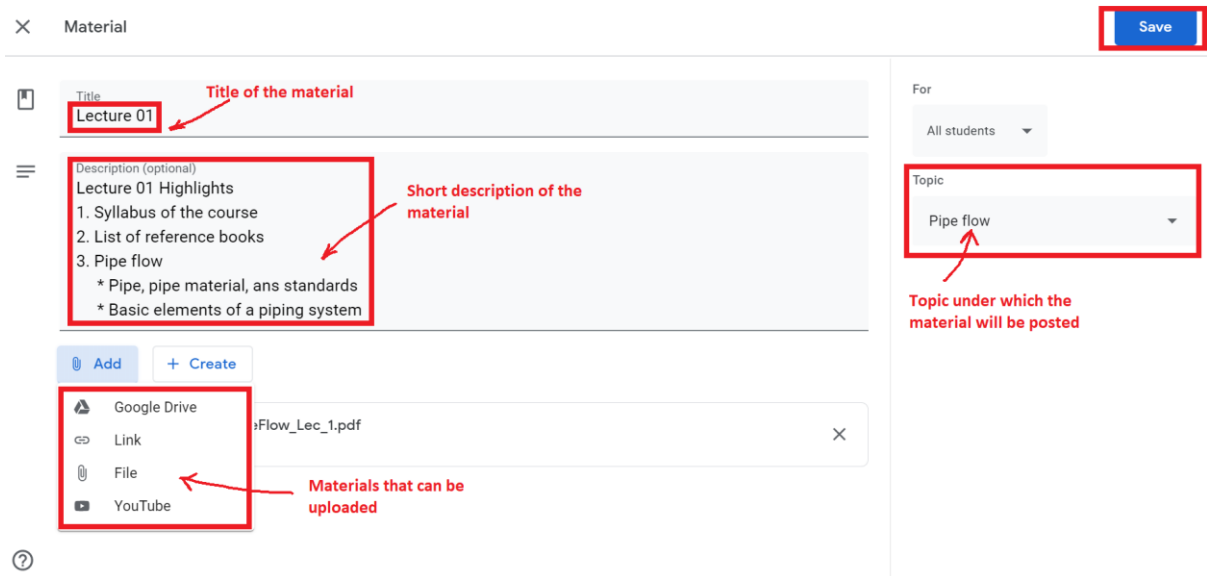


Fig. 14 Saving material for later edit

The materials that are scheduled or saved will appear in **gray** color in **Classroom** tab.

3.8.4 How to edit and delete a material?

It may be necessary for a teacher to edit or delete any posted material. In order to do that, he/he needs to go to **Classwork** tab and click on the material. On the right side of the material there will appear three vertical dots. Clicking on those dots will give you the options to edit or delete the specific material.

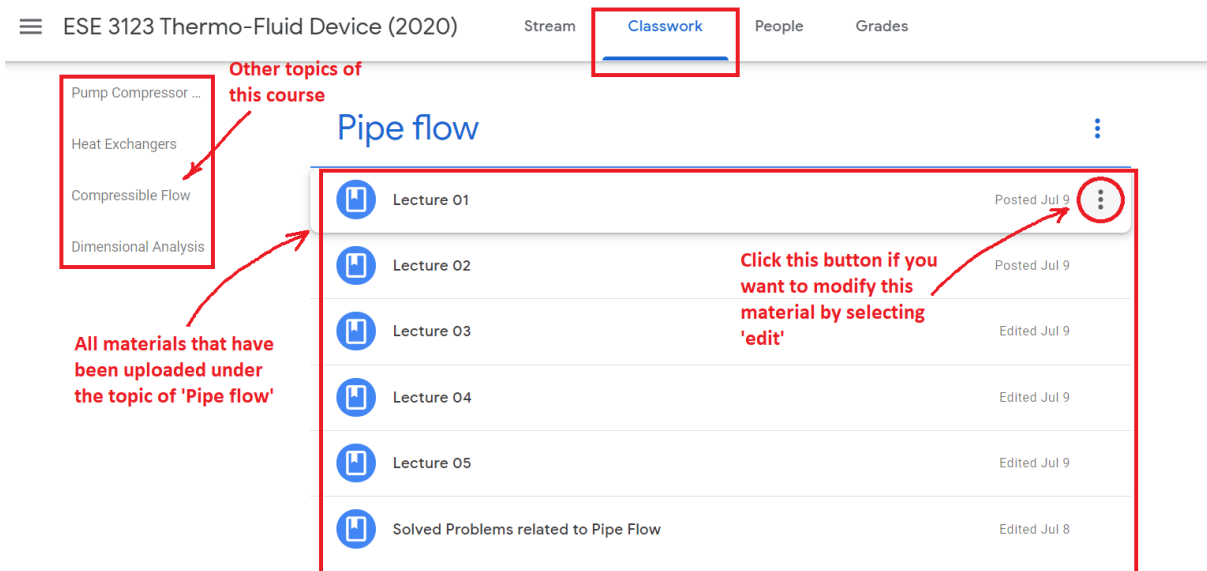


Fig. 15 Saving material for later edit

3.9 How to create quizzes and assignment?

As Academic Council has decide that some sort of assignment and quiz must be performed using LMS, this section will deal with creating assignments, quizzes, taking attendance of class participants.

3.9.1 Assignment vs. quiz assignment

There are difference in **Assignment** and **Quiz Assignment**. In **Quiz Assignment** a Google Form is created by GCR by default. This form has some limitations over the general Google Form that you can create manually. It is advisable *not* to use **Quiz Assignment** rather use **Assignment** and make **Google Form** manually if that is necessary.

Google Form is a broad topic to cover. It has many add-ons to make the form more effective for taking exams and quizzes. In section 5.0 some useful YouTube links are provided to learn about **Google Form**.

3.9.2 How to create time-limited assignments?

Time limited quizzes can be created using **Assignment** option in combination with Schedule option. Create an **Assignment** with a deadline and use **Schedule** at which the assignment will appear.

3.9.3 How to take attendance of the participants?

Taking attendance is created using **Question** option in combination with Schedule option. Create an attendance **Question** with a deadline and use **Schedule** at which the question will appear.

3.10 Important functionality of 'Stream' tab

As mentioned earlier, the **Stream** tab is the default tab when one enters a course. A teacher is able to post notices, announcements on the here. Moreover, every material, quiz, assignment posted by the teacher for the course will remain in the **Stream** as notification for all users chronologically. Teachers can control who can post in the **Stream**. It is advisable that teachers should disable the option that allows students to post on **Stream**.

4.0 Useful YouTube links for further Google Classroom tutorials

Introduction to Google Classroom

1. <https://www.youtube.com/watch?v=pl-tBiAM9g4>

Google Forms tutorial

2. <https://www.youtube.com/watch?v=BtoOHhA3aPQ>
3. <https://www.youtube.com/watch?v=p4lINhYinuM>

5.0 Reference

- [1] <https://www.valamis.com/hub/what-is-an-lms> (25-08-2020)