

Student Guide to Effective Learning Using Information and Communication Technologies



Rajiv Gandhi University of Knowledge Technologies

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Rajiv Gandhi University of Knowledge Technologies
ANDHRA PRADESH

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Foreword

This guide was developed to provide awareness about the effective use of information and communication technologies by students at Rajiv Gandhi University of Knowledge Technologies (RGUKT) in their day-to-day educational activities. RGUKT provides its faculty and students with state-of-the-art technologies in classrooms for innovative teaching and learning. Several novel teaching and learning practices have been introduced in the university to provide students with a blended learning environment. We believe that such an environment fosters student learning performance. This guide gives students information about the technology infrastructure, the central idea of blended learning, and the role of the student in such an environment. It also provides several step-by-step procedures on the use of the learning management system, open educational resources, and social media tools for education, and raises awareness about issues related to academic integrity and plagiarism.

RGUKT requested collaboration with and support from the Commonwealth of Learning (COL), Canada, to implement technology-enabled learning (TEL) in the university. COL commissioned a two-year project at RGUKT, entitled “Implementation of Technology-Enabled Learning (TEL) in Rajiv Gandhi University of Knowledge Technologies, Andhra Pradesh,” and extended the necessary support and expertise. The project started its activities in November 2016 and completed the entire process in June 2018. Dr. Sanjaya Mishra visited RGUKT twice during the project’s implementation to extend necessary technical support and guidance, and he periodically monitored its progress from COL’s headquarters. Dr. Indira Koneru served as a consultant to give the university staff training and guidance in developing blended courses. Professor V. Venkaiah, Director, CETLS, RGUKT served as the Principal Investigator and coordinated the project’s implementation by closely monitoring its progress. The project was successfully completed in strict accordance with the timelines set by COL for various activities, including the training of 60 RGUKT teachers, the development of a TEL policy for the university, the development of 21 blended-learning courses offered at RGUKT, the installation and management of DSpace software, and the creation and utilisation of an open-access repository at RGUKT.

I would like to thank Professor Asha S. Kanwar, President and CEO of COL, and Dr. K. Balasubramanian, Vice President of COL, for providing this unique opportunity to enhance the use of education technology at RGUKT. I extend a special thanks to Dr. Sanjaya Mishra, COL’s Education Specialist: eLearning, for providing the required direction and for guiding the authors at each step of the process of creating this student guide. My thanks are due to Professor V. Venkaiah, editor-cum-author, and the other two authors, G. Praveen and Dr. Indira Koneru, for developing a very useful student guide, which is presented in a lucid style and simple language, making it interesting for students. I am sure that this student guide will be of immense help to the students as well as the faculty of RGUKT.

Professor V. Ramachandra Raju
Vice-Chancellor
RGUKT-AP

Chapter 1: RGUKT – An Introduction

Foundation

RGUKT was created as a full-fledged university by the Government of Andhra Pradesh in 2008 through an Act of the Legislature. The university admits over 4,500 students into a six-year integrated programme every year (the top 1% of rural students) on the four residential campuses. Admission is based on merit secured in class X, observing the social category reservations as per government rules.

The university was established to provide high-quality educational opportunities for the gifted rural youth of Andhra Pradesh. Thus, the four campuses need residential accommodation for about 27,000 students for the six-year integrated programme. Having an entry class of 4,500 students leads to high-scale operation. This is unique to RGUKT and is being attempted for the first time in India. Thus, as a green field university, RGUKT represents a unique experiment in the educational arena.

The assumption is that information and communication technologies (ICT) permit the scaling of learning environments by one to two orders of magnitude. So the university from the beginning has aimed to apply advances in learning sciences and to explore the use of modern cognitive science tools in education and learning. Its focus has been to provide an environment that enables “Learning by Example,” “Learning by Doing,” “Problem-Based Learning” and “Self-Paced Learning.”

Objectives

The important objectives of the university are:

- To impart to each student broad skills for learning to learn, learning to think and learning to live;
- To reinforce core values of integrity, respect for all and care for the environment;
- To disseminate and advance knowledge in emerging fields such as information technology, nanotechnology, etc.;
- To make special provisions for integrated courses, including in the humanities, social sciences and other interdisciplinary areas, to impart broad-based education that includes soft skills;
- To function as a resource centre for knowledge management and entrepreneurship development in emerging technologies; and
- To establish close links with industry to make teaching and research at education institutes relevant to the needs of the economy at national and global levels.

Why RGUKT?

It is usually difficult for a person born into a low-income or rural family in India to study at a premier engineering institution (such as IIT/IIIT/NIT). This is because they start with many inherent disadvantages, such as:

- their parents' education level;
- the quality of the schools they attend and the teachers there;
- the inability to pay for coaching classes; and
- insufficient time to devote to studying.

On an average, the marks obtained by students in rural India are about 10–20% lower than the marks of students studying in the private schools of urban India. As a result, most higher education places are filled by students from these private schools when marks are the basis of selection. Even if a rural student is capable, the educational system doesn't allow him/her to go ahead. The goal of RGUKT is to help remedy this unfortunate situation.

At RGUKT, a “Lowest Best Model” is used to select students from a small community like a mandal, which has a few hundred students graduating each year, in comparison to selecting students using a state-wide or nation-wide ranking system based on marks or entrance tests. Such a practice overcomes the disparity in the selection process between the urban and rural environments. Therefore, the better performance of students in an urban mandal doesn't have an impact on the selection process for students in a neighbouring rural mandal.

RGUKT is also attempting to tackle the issue of “early specialisation.” In most cases, once a student goes into a junior college for a pre-university programme, he/she gets routed through coaching factories that drill them to get the top ranks in entrance tests, enabling them to secure a seat in a good college or university. This kind of intensive coaching makes students unidimensional with very little understanding of anything other than what they have been coached in.

Once students get into professional colleges, they have limited or no exposure to humanities and social sciences for the rest of their lives. RGUKT attempts to deal with this issue by giving students direct admission into a six-year integrated programme after class X. Here, they do not have to prepare for entrance tests. Since these students are already gifted and belong to the top 1%, it is expected that they do well naturally and don't need other entrance tests. However, the reservation system, based on the government's affirmative action programme, requires that students belonging to the weaker sections of society be given at least 50% of all the available seats. Many of these students, due to their backgrounds, are likely to be less educated and less trained, even though they might be the best in their sub-group. Thus, the student body entering RGUKT has diverse educational

levels. They have in common that they are selected for being the best in that community. The medium of instruction is almost always Telugu. This in turn brings about the need for remedial programmes to be developed so that all students can go through an educational programme with English as the medium of instruction.

In Andhra Pradesh, over 450,000 students pass class X in the state-wide exam every year. Of these, the top 1%, about 4,500 students, are probably brilliant, but their levels of educational achievement are diverse, based on their schooling and quality of education. Since admission into RGUKT is based on a “Local Best Model” and follows the rule of reservation as put forward by the Government of India, this top 1% has a wide range of marks. About 60–70% of the students coming from poor and rural backgrounds have the opportunity to study in a world-class institution.

Education at RGUKT is based on the intensive use of ICT. Every student is provided with a laptop during their stay on campus, with adequate Internet facilities. The flipped classroom method is implemented as well as the latest advances in learning sciences. Teachers follow a blended learning model that allows for the judicious use of online and face-to-face lectures, self-learning, and peer-group collaboration.

Chapter 2: Acceptable Use Policy for the University's IT Infrastructure

IT infrastructure

The students at RGUKT are provided with a laptop with 1 gigabyte of Internet access. The Internet bandwidth is shared by 6,500 students. A high-speed wireless campus area network is used to access the content prepared by the university, as well as education applications such as the learning management system (LMS), online quizzes, and discussion forums.

Classrooms at RGUKT are equipped with projection systems and audio systems to enable the playback of video lectures or live video conferencing using applications such as Skype and Google Hangouts. Students are provided with email accounts, Internet access accounts and other accounts to log in to the education applications. The accounts are accessed using secure credentials. Students must assume personal responsibility for the use of all the access given to them. This responsibility includes selecting a secure password, maintaining the confidentiality of the password, and changing the password regularly to assure the continued security of the account. Students are advised to report to the system administrators and immediately change their password if their account has been used by someone else or they believe it has been hacked.

Sharing of IT resources such as software licences, content, or any digital assets available via the university IT infrastructure that were not created by the learner should only be done with proper consent from the university.

The Internet, content servers and other applications made available via the computer network can be accessed by anyone at anytime. It is unacceptable to excessively use these network resources, as the whole community requires a fair share of them. Using the network responsibly so that others can also use it is a good practice.

You are responsible for your data. The university may have backup procedures for digital assets stored on the servers. You must be responsible for the data on your individual digital device, such as your laptop. Use backup options available on the Google cloud and via external storage media, such as pen drives, to keep multiple copies of the data that are important for you.

For convenience, the university allows you to use your digital devices and the network resources for your personal use. However, seek prior permission from the university if you need the IT infrastructure facilities for any commercial purpose.

Misuse of IT infrastructure

The following are not acceptable uses of the university infrastructure:

1. Network diagnostic applications such as port scanning should not be done unless you are a system administrator.
2. Do not share your passwords with anyone at anytime. If a password is shared, immediately reset it to avoid misuse of the account.
3. Do not log in to others' accounts, and do not use data or files that do not belong to you.
4. Do not attempt to crack others' accounts by guessing their passwords or by using password-capturing devices.
5. Do not send anonymous emails to upset the recipient(s).
6. Do not sabotage the services available to the community by using ping flooding or mail bombs.
7. Do not release virus software, malware or worms that replicate themselves for malicious purpose.
8. Do not send commercial emails, also known as spam, to individuals or mailing lists.
9. Do not resell services based on the university's network infrastructure, such as web hosting.
10. Do not willfully destroy university equipment.

Tips on basic IT use

Several online materials are available for first-time users of laptops and computers. Broadly, these courses cover applied digital skills. Topics include computer basics, the Internet, cloud services and the World Wide Web, productivity applications, computer security and privacy. Invest time in learning about these topics to make the best use of the tools you have at hand.

Two digital literacy online courses are:

1. Microsoft Digital Literacy¹
2. Applied Digital Skills²

Use and maintenance of personal devices

The university expects you to use your laptop for at least six years during the course of your study. It is not easy to keep your laptop for that long if you do not maintain it well. The Web offers several articles describing best practices for maintaining your digital devices. One good resource for maintenance tips is [wikihow.com](https://www.wikihow.com).³

¹ <https://www.microsoft.com/en-us/digitalliteracy>

² <https://applieddigitalskills.withgoogle.com/c/en/curriculum.html>

³ <https://www.wikihow.com/Take-Good-Care-of-Your-Laptop-Computer>

At times, even with good maintenance practices your computer may stop working. The article at this URL suggests some troubleshooting practices:

www.dummies.com/computers/pcs/how-to-troubleshoot-the-laptop-that-just-wont-start/

Operating system updates are periodically released. It is best to keep your computer up to date with these software updates. Almost all operating systems have an option to automatically update. Enable auto-update to ensure that the updates are installed without your intervention.

For hardware- and software-related issues, please contact the support staff on your respective campuses.

Chapter 3: Blended Learning

Up until quite recently, education has been in brick-and-mortar classrooms. The teacher is like a sage on the stage, delivering a lecture. Some students in the class give their undivided attention to the lecture, while others do not. Much has changed in the way education is provided since information technology has become increasingly affordable and ubiquitous. Teachers can now use smart boards and projection systems to show illustrations, animations and high-definition videos about complex concepts. Students can use mobile devices such as smartphones, tablets or laptops to answer questions posed by the teacher in class. A group of students can use a computer to collaboratively work on a project and present their work.

Blended learning goes far beyond these examples of using technology in the classroom. Instructors are now using technology to make learning more student-centric. Research shows that students take different paths to acquire knowledge. These paths depend on several factors, such as the student's prior knowledge, learning style, learning environment and so on. Some students take longer than others, and a few can demonstrate mastery without having to learn from the given learning materials. It is believed that every student, with enough time, can attain a mastery in the learning objectives set for them. Unfortunately, it was extremely hard to provide such variable learning times for students in the classical education system. Blended learning is an approach using technology to provide personalized, student-centric learning.

Several education institutions have adopted blended learning in a number of different forms. One popular form is the flipped classroom model. In the flipped classroom, students review the lectures as homework in the form of videos, at any location they prefer, at a time that they desire, at their own pace and alone or in a group setting. In class and in the presence of the teacher, they take up problem solving or project work. The teacher observes while the students solve problems and facilitates when students face challenges as they work. The benefits of the flipped classroom setting include variable time for learning and personalized help for students. Students can spend as much time as they need to learn from the lecture materials, including referring to any prior knowledge that they may have missed in their early education. Teachers can now observe the mistakes made by students during problem solving and address the issues by providing targeted remedial help.

The ultimate goal of blended learning is to provide personalised learning opportunities for students, encourage mastery, enable students to take control of their learning in a way that is suitable for them, and foster better learning outcomes. RGUKT has provided technology in classrooms in the form of projection and audio systems. Students are provided with dedicated laptops connected to the local area network and the Internet. Using this technology, a few models of blended learning activities have been discussed and/or piloted at RGUKT, including the flipped classroom model, tutored video discussions, self-study courses and asynchronous learning courses. An important piece of the puzzle is to make students aware of their role in blended learning environments.

The role of a learner

The role of a learner in a blended learning environment varies based on several factors, including the type of instruction, the facilities available to learners, the learning objectives set by the instructor, learners' goals in taking the course and so on. In general, the learner role encompasses the following:

- **Active engagement in instructional activities:** Instructors design several learning activities in a course to help learners acquire knowledge in the most desirable manner. The role of the learner is to understand the learning objectives and actively engage in the learning activities to meet the objectives. Time on task is one of the most important factors for robust learning. This means that knowledge acquisition is better when the learner deliberately and actively engages with the learning activity.
- **Taking control of your learning:** Blended learning provides a good chunk of time for self-learning. Students can learn for any amount of time using any resource that is suitable to them, in a place that is most convenient to the learner, and with a group of other learners or by themselves. This is an opportunity for learners to take control of their learning. Making learning plans and executing them is an important skill. Learners can now use strategies that work best for them to meet their learning goals. For instance, what type of materials work best for the learner, knowing when to study, choosing between group learning or solo learning, etc. are all factors that the learner can control.
- **Monitoring your time and your learning:** Awareness of time and learning are important for success. Time management is a key skill, as a significant amount of time is under the learner's control. In addition, the learner needs to be aware of the learning objective and his/her prior background, and to have strategies for checking whether s/he is making progress. For example, going back to learn a concept upon incorrectly answering a quiz is a good strategy; it shows that the learner is aware that s/he has misunderstood a concept and is making an attempt to clarify it.
- **Seeking help as needed:** Learners should know what help is available in the blended learning environment. The level of help can vary from one course to another. Learners should seek help as needed and should reach out to the instructor, teaching assistants and/or peers, or make use of online or offline learning resources.
- **Using technology for learning:** Learners have several technological options for learning. Understand what these technologies offer and make the best use of them. Always seek help from instructors and/or IT administrators if an item of technology doesn't work as expected.

Expectations for learners

Blended learning environments are designed to offer opportunities for students to attain high levels of competency and mastery. Learners are expected to aspire to higher

achievement goals and work hard to achieve these. Use opportunities to express what you have learned, such as by answering questions, making presentations, participating in discussions, etc. Make good use of the time available for self-learning. Use technology effectively without becoming disengaged from the learning activities. Balance the time between problem-solving practice and using videos/texts to learn. It is OK to make mistakes, as they present learning opportunities. So learn from those mistakes by talking with others to clarify what you have misunderstood, and elicit feedback from instructors or peers. Seek help as needed, and offer to help others who are in need.

Do's in blended learning

1. Attend to and engage in all instructional activities.
2. Use technology for learning.
3. Identify the learning objectives and set your goals.
4. Follow a learning strategy that works best for you.
5. Monitor your learning.
6. Work hard and strive for excellence.

Don'ts in blended learning

1. Take your time to learn, but do not procrastinate.
2. Collaborate but don't plagiarize.
3. Be wise with the use of technology; don't misuse it and get distracted.
4. Balance learning activities, and don't neglect problem-solving practice.

Individual learning versus group learning

Individual learning strategies work well when the individual differences among learners are numerous and varied. This strategy gives learners an opportunity to take their own time and their own learning path to acquire knowledge.

Group learning is great for instructional activities that are collaborative in nature, problem solving, analysis of case studies, tutored video discussions, group discussions, etc. The size of the group and the skills of the facilitator are factors that affect the success of a group-learning activity. The right group for collaborative learning offers an opportunity for learners to express the knowledge they have acquired, clarify any misconceptions, learn from each other's mistakes and so on.

Chapter 4: The Learning Management System

Moodle-enabled blended learning

At RGUKT, blended learning is the thoughtful integration of face-to-face teaching and online learning through the use of an open-source learning management system (LMS) called Moodle⁴ (Modular Object-Oriented Dynamic Learning Environment). Moodle-enabled blended learning is designed to provide students with flexible, active, reflective and collaborative learning opportunities through RGUKT Moodle⁵ for improved participation and success.

Moodle is a popular LMS that enables institutions and educators to build flexible, interactive, dynamic, collaborative, connected and constructive learning environments.

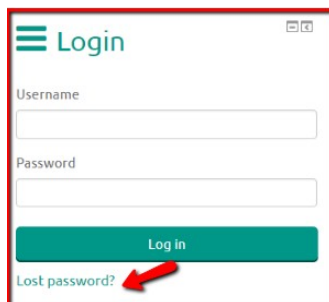
Moodle functionality enables teachers to (i) share learning resources in a variety of media; (ii) facilitate and promote interaction and communication between learners and instructors and also among students; (iii) track learners' progress and course participation; and (iv) assess, grade and report students' performance with feedback.

Moodle-enabled blended courses engage you in pre-class reading and learning through a variety of media as well as in-class and post-class activities, such as forum and chat discussions, assignments, quizzes, wikis, etc.

RGUKT Moodle server

The following instructions will help you understand Moodle; access and log in to the RGUKT Moodle site; change your password; reset a forgotten password; and avoid site display inconsistencies.

Accessing and logging in to the RGUKT Moodle site



Open a browser (Firefox or Chrome) and navigate to <http://lms.rguktn.ac.in>.

In the login box, key in your username and password, provided to you by your faculty.

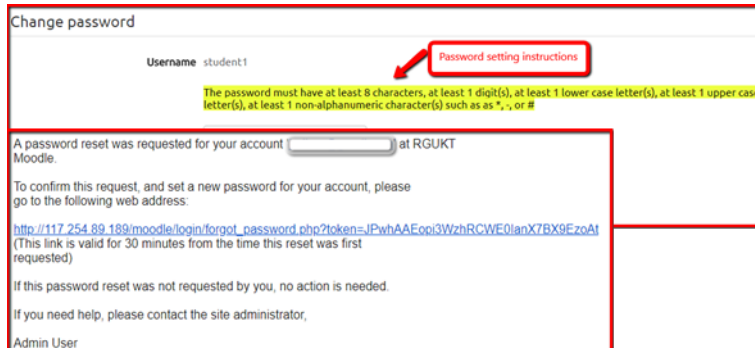
⁴ <https://moodle.org/>

⁵ <http://117.254.89.189/moodle/>

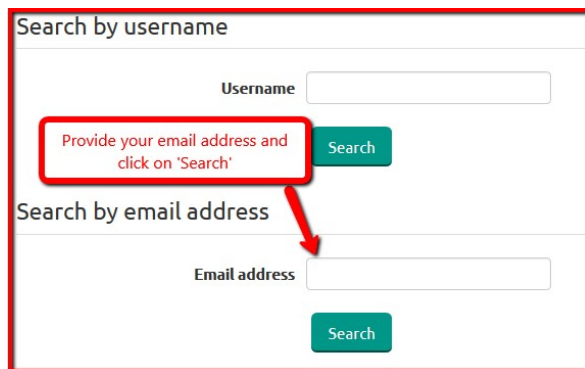
Changing your password

After logging in, click on “user menu”/your name in the upper right corner of any Moodle page and click on **Preferences**. Under “User account,” click on **Change password** to change your password as per the RGUKT Moodle site password policy. The password must have at least eight characters, at least one digit, at least one lowercase letter, at least one uppercase letter and at least one non-alphanumeric character, such as as *, - or #.

Resetting your password



Click on the “Lost password?” link (http://117.254.89.189/moodle/login/forgot_password.php) in the login block to reset your password. On the “Forgotten password” screen, submit your username or your email address. You only need to use one of the two options; do not use both.



If you supplied a correct email address, an email will be sent to it, with instructions on how to gain access again. It contains easy instructions to confirm and complete this password change. If you continue to have difficulty, please contact the site administrator.

Avoiding site display inconsistencies

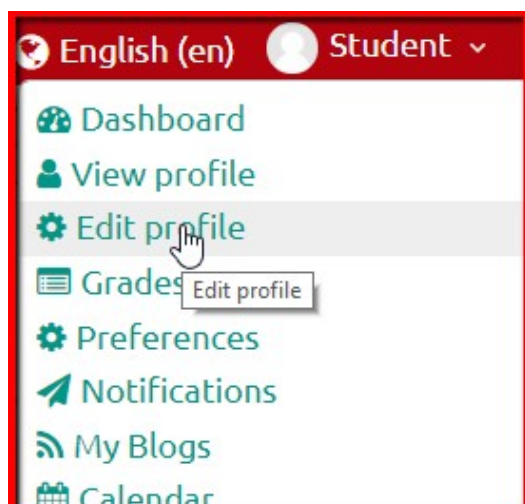
Use the latest version of Mozilla Firefox⁶ or Google Chrome⁷ to avoid display inconsistencies. Upgrade your browser to the most recent version and to have more than one browser installed on your computer. If you encounter problems using Moodle in a browser, move to another browser to resolve your issue. To check your browser version, go to Whatbrowser.⁸

⁶ <https://www.mozilla.org/en-US/firefox/new/>

⁷ <https://www.google.com/intl/en/chrome/browser/>

⁸ <http://www.whatbrowser.org/>

Updating and viewing your profile



The following instructions will help you with updating and viewing your profile on Moodle.

Updating profile

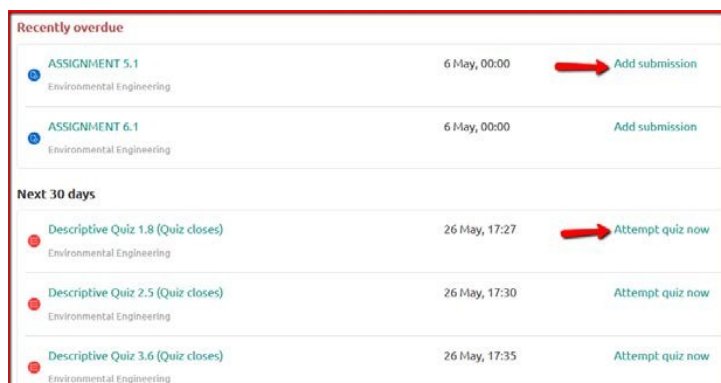
Click on “user menu”/your name in the upper right corner of any Moodle page and click on **Edit profile**. Provide a brief description about yourself, which will be displayed to your classmates and teacher. Upload your profile picture and click on the **Update profile** button at the bottom of the page.

Viewing profile

To view your profile, click on “user menu”/your name in the upper right corner of any Moodle page and click on **View profile**.

Accessing blended courses and activities

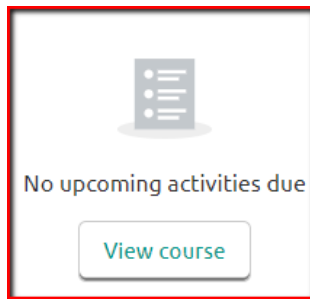
Once you are logged in, by default you are at your dashboard. On your dashboard, the **Timeline** tab provides you with an overview of activities that need your attention, and the **Course** tab lists the course you are enrolled in.



Click on the “Sort by dates” button under the “Timeline” tab to view the “Recently overdue” activities and “Upcoming activities” (Next 7 days/Next 30 days) with deadlines and direct links to access and submit the activities.

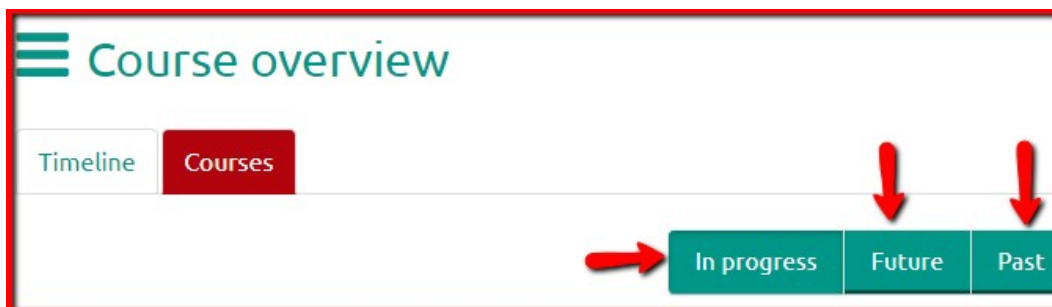
You can sort and view the activities

by courses by clicking on the “Sort by courses” button to view the courses you are enrolled in, with the percentage of activity completion (if your teacher enabled “Activity completion” in the course and created each activity with a deadline or a completion date).



Note: If activity completion is not being used, or if no activities are due, then the course overview block will display a grey icon.

Click on the “Courses” tab for an overview of current courses (In progress) with the percentages of activity completion. You can also view “Future” courses with a start date in the future and “Past” courses, which you have completed. Click on a course listed under “In progress” to access it.



Structure and components of a blended Moodle course

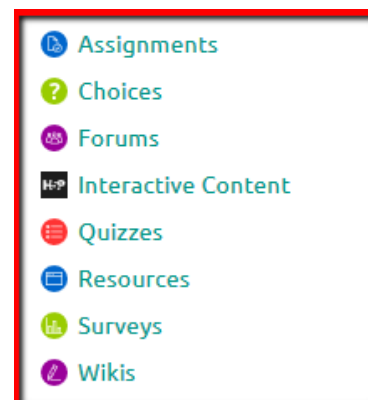
A blended Moodle course is structured into blocks on the right/left side (depending on the Moodle theme used) and course content in the middle part. The course content is organised either in Units or Week. In the General area /‘Topic 0’, you may find a course introduction video created by your Faculty or course summary, learning outcomes, evaluation scheme, reference books, Facilitator (Faculty) contact details and downloadable course syllabus.

Content

In the content area, you find the learning resources, learning activities and assessments shared and created by your faculty under each unit or week.

Learning resources

The learning resources may include: files (e.g., Word, pdf, ppt, Excel), folders with multiple files, URLs for sharing Web resources, pages with multimedia content (text, images, audio, video), books (a multi-page resource with multimedia content organised in topics and sub-topics), etc.

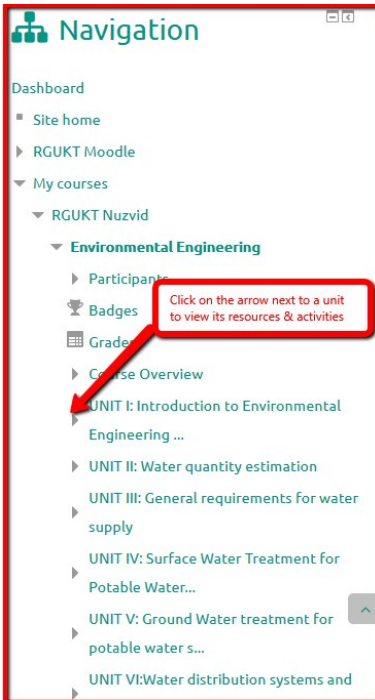


Learning activities and assessments

Learning activities and assessments may include assignments, chats, choices/polls, forums, interactive content/video, quizzes, surveys, wikis, etc.

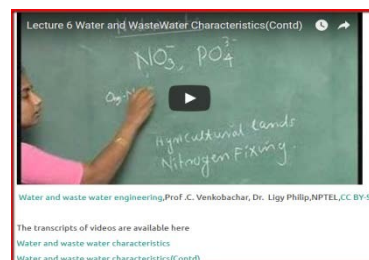
The availability of resources and activities in your blended Moodle course(s) depends on whatever learning resources and activities your faculty has created and shared.

Use of readings, videos and links



You can scroll down to a particular unit to view and access the learning resources added/shared and the activities created.

Or you can access the course readings, video and Web resources from the “Navigation” block. Expand a unit by clicking on the arrow next to a unit/week to view and access the resources and activities.



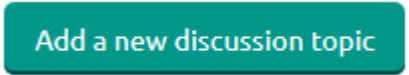
Use of discussion forums

Each Moodle course has two types of forums: (i) the announcements forum and (ii) learning forum(s). The **announcements forum** is meant for one-way communication; only your teachers post news, general announcements and alerts there.

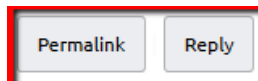
Learning forums are meant for two-way interactions. They enable your teachers to initiate discussions and you to respond to your teachers' and peers' discussions as well as exchange ideas beyond class time. Forums allow your teachers and you to embed or attach files such as images and media. Your teachers can rate your forum posts and grant permission for students to rate each other's posts.

Your teacher might use some or all of the following types of forum to engage you in reflective, collaborative and constructive discussions beyond the classroom.

- **Standard forum:** where anyone can start a new discussion (thread) at any time by clicking on the **Add a new discussion topic** button.

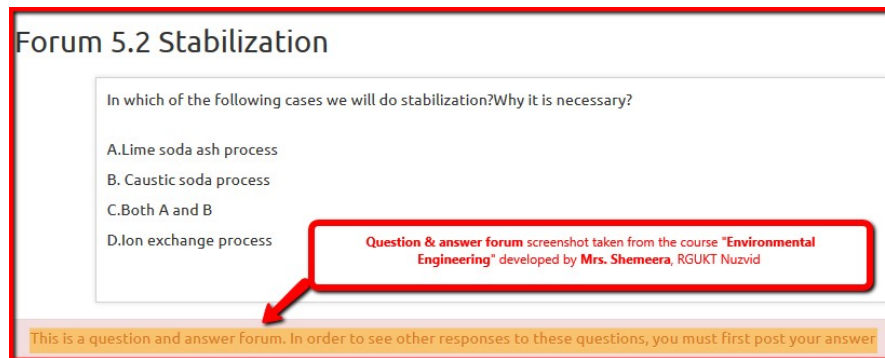


- You are expected to respond to a discussion thread initiated by your peers by clicking the **Reply** button at the bottom.



Each person posts one discussion forum: where you (each student) can post exactly one discussion.

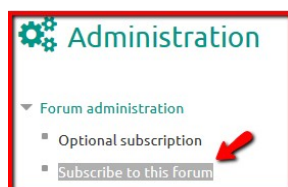
- **Question and answer forum:** where your teacher posts a question and you as a student must first post your answer by clicking on the **Reply** button for the post before viewing other students' posts.



- **A single simple discussion forum:** where your teacher posts a question and you can only reply by clicking on the **Reply** button. You cannot start a new discussion thread.

Subscribing to Forums

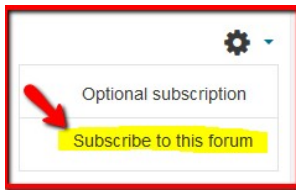
Subscribe to forums to keep track of online discussions in your Moodle course(s) and receive email notifications. You can subscribe to forums on the course forum page or through user account preferences.



Subscribe to forums: You will receive one email per forum post if you have subscribed to that forum. Follow either of the following two options, depending on the Moodle theme used.

To subscribe to a forum, click on the **Subscribe to this forum**

link in the **Administration>Forum administration** block, which is available on the forum page.



Subscribe to an entire forum by opening the administration **gear** icon in the upper right corner of the forum.

Manage email notifications through your preferences to keep track of online forum discussions in your Moodle course(s).

- Click your name or user icon (at top right of your course page) and from the **User menu** drop-down, select **Preferences**.
- On the *Preferences* page, under **User account**, click **Forum preferences**.
- On the *Forum preferences* page, enable the following three forum subscription and tracking options and save changes.
 - **Email digest type** drop-down menu, select one of the following email digest types options to receive forum notifications.
 - **No digest.** You will receive one email per forum post (default).
 - **Complete.** You will receive one digest email per day containing the complete contents of each forum post.
 - **Subjects.** You will receive one digest email per day containing just the subject of each forum post.
 - **Forum auto-subscribe: Yes.** When you post, you subscribe to that forum.
 - **Forum tracking: Yes.** This will list the number of unread posts, so you can see where the new forum content is located.

Do's and don'ts

The following do's and don'ts will help you participate in meaningful and constructive discussions beyond the classroom and building an online learning community.

- Stay focused on the discussion topic initiated.
- Make your messages brief as well as easy to read and understand.
- Participate in meaningful and constructive discussions.
- Be mindful while writing a post, and review it before hitting the post/reply button, to check whether your grammar is correct, your tone is appropriate and your contribution is to the point.
- Encourage others to participate in and contribute to the discussions.
- Value and praise others' contributions — their ideas and perspectives.
- Discussion forums are meant for participation. Don't just log in and read the posts and replies of others. Respond and add value to others' ideas and reflections.

- Don't post the first thing that comes into your mind; think and write a meaningful post or reply. You will have 30 minutes to edit your post.
- Respect diversity. Never post offensive or sarcastic comments directed at religious or communal beliefs, disabilities, etc.
- No yelling. Never use BOLD UPPERCASE LETTERS. That is like yelling at somebody.
- **No flaming.** Criticism must be constructive and well-articulated and add value to the discussion initiated.

Use of assignments and quizzes

Assignments	Due date
Assignment 1.1	Wednesday, 14 February 2018, 12:00 AM
ASSIGNMENT 1.2	Friday, 6 April 2018, 12:00 AM
Assignment 2.1	Thursday, 15 February 2018, 11:00 PM
Assignment 2.2	Thursday, 15 February 2018, 11:55 PM
Assignment 3.1	Tuesday, 20 February 2018, 3:30 PM
Assignment 3.2	Thursday, 22 February 2018, 3:30 PM
Assignment 4.1	Saturday, 17 March 2018, 11:00 PM
Assignment 4.2	Friday, 6 April 2018, 12:00 AM
ASSIGNMENT 5.1	Sunday, 6 May 2018, 12:00 AM
ASSIGNMENT 6.1	Sunday, 6 May 2018, 12:00 AM

Assignments

The assignment activity allows you either to submit files or to type text online. The “file submission” assignment enables you to submit files, such as word documents, PowerPoint files, spreadsheets, images, audio and video clips, etc. The online assignment requires you to type text directly into the text editor.

Your teacher will review your assignment submissions, award marks and leave feedback. You can view your grades in the gradebook.

Quizzes

Quizzes may be used as course exams, mini-tests at the end of a topic, practice exams or for self-assessment. The quiz activity enables you to attempt either a single item or multiple items, depending on the quiz setting defined by your teacher.

Screenshot taken from the course "Mass Transfer Operations-II" developed by Ms. Koteswari

Topic	Name	Attempts
Unit I - Introduction to Distillation	Practice_Quiz-Introduction to Distillation	Attempts: 51
Unit II - Distillation_Designing Principles	Practice Quiz_Distillation_Designing Principles	Attempts: 52
	Surprise Test 1_Distillation Designing	Attempts: 49
Unit III - Liquid Liquid Extraction	Practice Quiz_Liquid Liquid Extraction	Attempts: 45
Unit V - Adsorption and Ion Exchange	Practice Quiz_Adsorption	Attempts: 17
Unit VI - Crystallization& Membrane processes	Practice Quiz_Crystallization	Attempts: 15

Your teacher can create quizzes comprising questions of various types, including multiple choice, matching, short answer, numerical, etc., with a time limit.

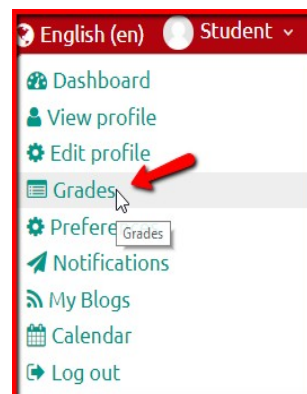
Your quiz attempt/s is/are marked automatically, with the exception of essay questions, and the grade is recorded in the gradebook. Your teacher decides when you can review the quiz and see the correct answers and feedback.

Checking Grades

On the course page, click on the **Grades** link in the **Navigation** block to see the **User report** (your grade report). If you have multiple Moodle courses, click on “user menu”/your name in the upper right corner of any Moodle page and click on **Grades**. On the “Grades overview” page, click on a course to view that course grade report/“user report.”

Your grade report includes:

- each grade item (assignment, quiz, etc.) in the course
- a grade for each item
- feedback for each grade (if your teacher provides this)
- course total



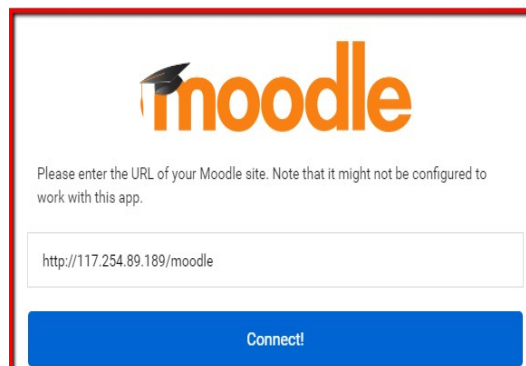
Use of Moodle mobile app

The Moodle mobile app allows you to access the RGUKT Moodle site and course content, both online and offline, using your mobile phone/tablet; you can learn wherever you are, whenever you want.

Mobile app features

With the Moodle Mobile app, you can:

- easily access course content — browse and download the course content for offline use
- keep up to date — receive instant notifications of messages and other events, such as assignment submissions
- submit assignments — upload assignment submissions from your mobile device
- track your progress — view your grades and check completion progress in courses
- complete activities anywhere, anytime — attempt quizzes, post in forums, edit wiki pages, play SCORM packages
- connect with course participants — quickly find and contact other people in your courses, etc.



Installing the Moodle mobile app

Download and install the official Moodle mobile app from the Google Play store or the Apple App Store.

- Android app:
<https://play.google.com/store/apps/details?id=com.moodle.moodlemobile>
- iOS app: <https://itunes.apple.com/app/moodle-mobile/id633359593?mt=8>

Configuring the Moodle mobile app

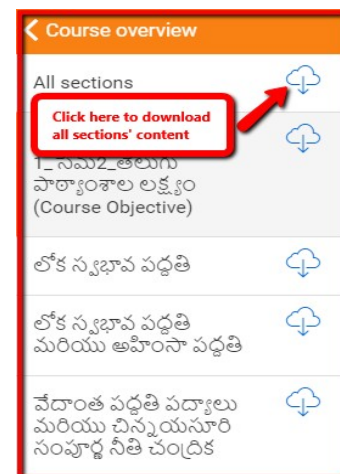
Follow these steps to configure the Moodle mobile app:

- Upon opening the app, enter the URL of the RGUKT Moodle site and click on **Connect**.
- Log in using your credentials (username and password provided to you) for accessing your Moodle on your laptop browser.
- On the “Course Overview” screen, click on a course.
- On the course screen, click on **All sections** or click on a single section to access and view the content online.
- On the course screen, tap the **three dots menu** (top right); click on **Participants** to view participants and send individual messages.

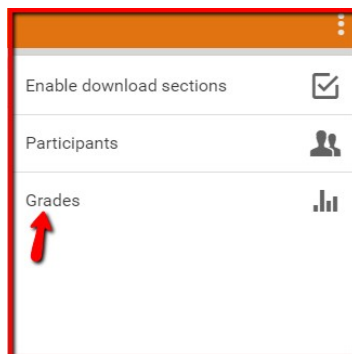
Accessing Course Content Offline

To download the **course content** and access it **offline**, click on the “cloud” icon next to “All sections” or to each section/unit.

- Attempt quizzes, submit assignment(s), post in the forums, make choices, take surveys, etc.
- Your offline activity and data will be synchronised when your mobile is connected online.



Notifications: You will receive (push) notifications of calendar events, messages, forum posts, submitted assignments, etc. Go to Settings → Notifications/Messages to view the push notifications.



Grades

On the course screen, tap the **three dots menu** (top right). Click on the **Grades** link to view your course grades.

Moodle Desktop

Use the Moodle Desktop application if you do not own a smartphone, to experience all the functionalities that are found in the Moodle mobile app. Moodle Desktop is now available for:

- Windows 10⁹
- Windows 7 and 8 Installer¹⁰
- Mac¹¹

⁹ <https://www.microsoft.com/en-in/store/p/moodle-desktop/9p9bvwvhd8c8?ocid=badge&rtc=1>

¹⁰ <https://download.moodle.org/desktop/download.php?platform=windows>

¹¹ <https://itunes.apple.com/app/moodle-desktop/id1255924440?ls=1&mt=12>

Chapter 5: Using Social Media

The early Internet and Web applications were primarily used for seeking/using information. In the early 2000s, the emergence of Web 2.0 enabled the creation of highly engaging and interactive applications on the Web. Using Web 2.0 applications, Internet users could collaboratively create content and share it with the rest of a community in real time. In this chapter, we discuss some of the Web 2.0 applications that are now commonly referred to as social media.

One of the first successful social platforms was Wikipedia,¹² which is a free online encyclopedia created and edited by volunteers from all around the world. The Wikimedia Foundation created this social platform, in which any user can create a profile and start creating content. Some users on the same platform take on the role of editors to verify, correct and clean up the content based on certain guidelines established by the foundation. Today, this platform contains close to six million articles in English, and a total of about 40 million articles in 293 languages.

Access to such free and open knowledge on the Internet, which is always available, is a great asset for learners. Social media fosters access to learning materials on demand, in a language that the learner prefers and in the desired presentation format (i.e., text, image and video formats).

The role of social media in learning

Using social platforms, learners can communicate and collaborate without any restrictions of time or place. Students can access the materials given by the faculty, and they can collaboratively annotate these and share with the rest of the class. Educators can watch these interactions and update the materials or provide supplementary materials for students to learn.

Students can post questions, which may arise after the classroom lecture is done, when they are working on their assignments or projects. Fellow classmates and faculty members can answer. Such questions can be tagged to the lectures or to other materials so that other students can very quickly find and benefit from such question-and-answer interactions.

Faculty can give team-based assignments to students to foster collaboration. Students can work on the assignments together without having to be available at the same time and place. Students can also post their work for critique. Faculty can perform interim reviews of the assignments and provide feedback without needing to be available at the same time and place.

¹² https://en.wikipedia.org/wiki/Main_Page

When a teacher wants to present a new idea, when a previous lecture did not go well, or when students require additional input, lecturers can host a live lecture using Google Hangouts. Teachers can share their screen, sketch and show materials on the screen, and answer questions in real time. Students can post questions by typing text, and other students can follow along. The teacher can take these questions when s/he is ready to answer them. Students who miss the lecture can view it on the Web when they have time.

In addition to these facilities for students and educators, there are platforms available for self-learning and for exploratory learning. At times, students may lack the prior knowledge needed to solve an assignment. They may want to learn about a new topic of interest to them or find out more about a topic covered in a different lecturer's class. Social media platforms address such learning needs. Students can find tutorials to acquire prior knowledge, or follow a world-renowned professor by finding the person's social media profile to view their work and perhaps even to ask them a question. Students can also follow a topic of interest by looking up hashtags created for that topic. With social networking websites, they can find people who are exploring similar or the same areas of interest, and they can connect with them.

Blogs

Blogs are websites with a collection of blog posts, often written in an informal diary-style format. Blogs enable a person to write and to publish within minutes on the Internet. Anyone can have their own blog, through which they can share their opinions, reflections and critiques of events and their analysis of concepts. Blogs are normally arranged like a diary, as they are personal to an individual. People who write blogs and publish them are called bloggers. A blog website is organised as a chronological list of blog posts, often with the most recent blog post on the top of the page. When a blogger has an idea or a thought, s/he can create a blog by filling out a form that has a subject and a body. When the writer clicks "post," the blog article will appear on the blog website immediately. All blog posts are archived by date and time. Each blog post can also become a discussion with the use of comments. Readers of the blog can post their comments and reply to others' comments.

Over time, as bloggers have increased in numbers, they have started creating relationships, and they work together by commenting, linking to each other's posts in their blogs and sharing the blogs in their communities. You can find blogs of interest using search engines such as Google. Blogger¹³ and Wordpress¹⁴ are common platform for blogging, where you can create an account to start your own blogs related to your topics of interest. Blogs can

¹³ <https://www.blogger.com/>

¹⁴ <https://wordpress.org/>

serve as an excellent way to create a portfolio and present the achievements of students during their studies.

While writing your blog, it is important to avoid:

- adding content hosted by someone else, without their consent. This will be treated as plagiarism.
- using copyrighted materials, as that could lead to legal issues.
- adding content that violates the blog platform's content policy. This includes, but is not limited to, explicit imagery posted without the subject's consent, and hateful, violent or crude content.

It is always good to provide as many links as possible in your blog to substantiate your ideas by referring to other sites, articles and research work available on the Web.

Discussion forums

In the previous chapter, you were introduced to the discussion forum available on the learning management system. There are many other independent platforms where you can create, manage and participate in discussions on topics that interest you. Discussion forums are a place for reflection and the collaborative building of knowledge.

A typical discussion involves asking a question or sharing an idea. Someone in the discussion group then responds with an answer or opinion. This develops into a discussion thread with several rounds of questions and answers, taking a deep dive into the original question. With the Internet and Web applications, anyone can post a question at any time and from any location, and responses can be posted in the same way.

Websites that provide features for online group discussions are called discussion forums. Several popular discussion forums are available on the Internet. Some of them are general purpose, while others are subject specific. One very popular general-purpose discussion forum is Quora.¹⁵ A software developer might use a discussion forum called Stackoverflow¹⁶ for technical discussions specific to software development and programming. These discussion forums over a period of time develop expert knowledge bases, and some users who provide suitable responses and demonstrate expertise are followed by others. You too can become an expert online, provided you develop an attitude of sharing your knowledge to help others.

¹⁵ <https://www.quora.com>

¹⁶ <https://stackoverflow.com>

Discussion forums survive on members' free contribution of their time and expertise. We encourage you to join discussion forums. However, be sure to avoid abusing anyone or posting materials and information that could hurt another person or community.

Social bookmarking

The number of websites on the Internet is so large that it is neither possible nor necessary to explore all of them. Traditionally, for websites that we frequently visit, we use the browser's "bookmarks" feature. When you add a bookmark to the browser, it remembers that webpage and saves it for future reference. Browsers offer a way of organising bookmarks into folders so that it is easy to find what you are looking for. However, if you are not using the same computer, you will lose the ability to visit the bookmark on the web browser of that machine.

A new way of organising bookmarks is to use social bookmarking on the Web; this ensures your bookmarks are available to you anytime and anywhere that you have Internet access. In addition to organising bookmarks, social bookmarking websites enable the collaborative discovery of websites that are useful for a particular purpose. You can find bookmarks using a search tool or by filtering them by tags/categories. You can add to your bookmarks new websites that you find interesting. You can share your bookmarks with a friend or a group of friends. Some of these apps also recommend new bookmarks based on the topics you explore.

As part of the learning process, we often find material on several websites. Using social bookmarking apps, you can organise all the information you find by topic, so you don't have to spend time searching for websites again. Some of the most widely used social bookmarking sites are Digg,¹⁷ Scoop.it¹⁸ and Pocket,¹⁹ all of which you can use for building social bookmarks of sites and topics that interest you. Using a social bookmarking tool, you can also follow experts, find out what they are reading and gain new ideas from the sites they bookmark.

To keep your bookmarking simple:

- avoid bookmarking everything you visit, as this will clutter your bookmarks;
- prioritise your bookmarks in order of importance and preference; and
- add tags to your bookmarks to group them based on topics of interest.

¹⁷ <http://digg.com/>

¹⁸ <https://www.scoop.it/>

¹⁹ <https://getpocket.com/>

Social networking

Social networks are people networks, and these are very useful for building a shared community. In our daily lives, we connect with people to perform tasks that get us closer to our goals. These might be to find a job or hire someone or get an opinion from the right person about an idea or a problem that you are trying to solve. Traditionally, such people networks existed but were hidden. It was hard to know who might become a friend, and it was time consuming to connect to the right people. Social networking websites uncover these friendship networks, helping people to connect with mutual friends and friends of friends. The two most popular social networking websites are Facebook²⁰ and LinkedIn.²¹ Many people use Facebook as a personal social network and LinkedIn as a professional network. You can use both of them for your learning and to create a profile that will help build your career.

When you use social networks:

- Don't add unknown people to your network.
- Unfriend people who bother you.
- Keep your account secure by using two-factor authentication.
- Don't share sensitive and personal information on a social networking website.

Conclusion

There is significant debate over the use of social media in learning. Some educators feel that students become distracted and misled by using information available on social media. They can also experience information overload from having too many sources of information. While these are legitimate concerns, social media applications provide a wealth of features for students who are self-directed and self-regulated learners. Using the right applications in the right way to learn and acquire knowledge can help students find good leads very quickly.

However, students need to use social media carefully, which includes checking the authenticity of the information they find there. Sites such as Snopes²² are useful for confirming the veracity of stories circulated on the Web. An even better way is to ask: Who is the owner of the account? Is s/he credible? What is the nature of the information shared — opinion or fact, scientific or non-scientific? If any information is debatable, it is important to find other perspectives as well. This will help you develop a complex outlook on various topics, which fosters holistic learning. Also bear in mind that your use of social

²⁰ <https://www.facebook.com/>

²¹ <https://www.linkedin.com/>

²² <https://www.snopes.com>

media should be need-based and purposive, so the time you spend on social media should be controlled.

The use of social media tools has changed the way we communicate today. So teachers and students may also use other tools, such as messaging platforms (through mobile phones) and video channels (such as YouTube) to share ideas and information to interact with the world. They provide you with opportunities to learn from other experiences and build your online digital identity, which can support your career and other life activities.

Chapter 6: Using Library Resources

In an education system, students and teachers need information for academic studies, curriculum development, teaching and research. Libraries play a vital role in the information transfer process, from generation through to consumption and regeneration. Every element of an education system in one way or another is dependent on libraries. Academic libraries have a close relationship with learning and aim to realise the educational goals of their parent institutions. Libraries not only procure and provide materials for study and research but also feed students' intellects and encourage researchers, thereby serving the teaching and research needs of the user community.

As “treasure houses” of knowledge, libraries gather and maintain coherent collections of information sources. Traditionally, a library collection comprises textbooks, reference books, e- resources to support learning and teaching, as well as reports, conference proceedings, theses, dissertations, patents, standards, indices and abstracts, many of which carry nascent information to support research in their respective disciplines. These acquired resources are processed, organised and distributed to users. Library tools, such as individual catalogues and online public access catalogues (OPACs), as well as indexing and abstracting tools, guide users in locating and accessing information resources.

Modern libraries have been redefined as information facilitators, providing access to information in a wide variety of formats, whether it is stored inside the library or available elsewhere in external information systems and repositories.

Central Library, RGUKT Nuzvid²³

The Central Library at the RGUKT Nuzvid campus opened in 2009. The total area of the library is 150,000 square feet, and it can accommodate up to 1,000 students. Nearly 500 students and staff members visit the library every day. RGUKT's library collection includes text books, additional reading books, reference books, newspapers, magazines, journals, electronic resources (such as e-books, e-journals and other e-content) as well as video recordings produced by RGUKT.

The library has books related to engineering subjects, NCERT books, general and technical periodicals, and research journals in print and electronic formats. The full-text e-resources include ICC Xplore, ASCE and ASME journals available through IP-based authentication from the university. There is an OPAC for library resources, and the library has Wi-Fi connectivity and photocopying facilities. It regularly organises student orientation programmes.

²³ <http://rguktn.ac.in/library>

Central Library, IIT, RK Valley, RGUKT²⁴

The RK Valley Central Library functions in a two-storey building that is centrally situated and easily accessible to all departments on campus. Its area is about 5,500 square feet, with a seating capacity of 1,000 students and 70 faculty members at a time.

The library is equipped with a highly modern infrastructure using state-of-the-art technology. It is fully automated using KOHA open-source software, and a link in the home page of RK Valley Library provides access to its OPAC (Online Public Access Catalogue) system. Like the Nuzvid campus library, the RK Valley library also has books and journals on engineering subjects, e-resources, Wi-Fi connectivity and a photocopying facility.

Open access (OA) repository at RGUKT

Institutional repositories are online databases that capture, preserve and make accessible the intellectual and research output of an institution. RGUKT has an institutional repository for making in-house produced content and literature available and accessible online, free of charge, and free of most copyright and permission restrictions. RGUKT's OA repository is built using DSpace.

DSpace

DSpace is an open-source software platform that enables organisations to:

- capture and describe digital material using a submission workflow module;
- distribute an organisation's digital assets over the Web through a search and retrieval system; and
- preserve digital assets over the long term.

RGUKT DSpace²⁵

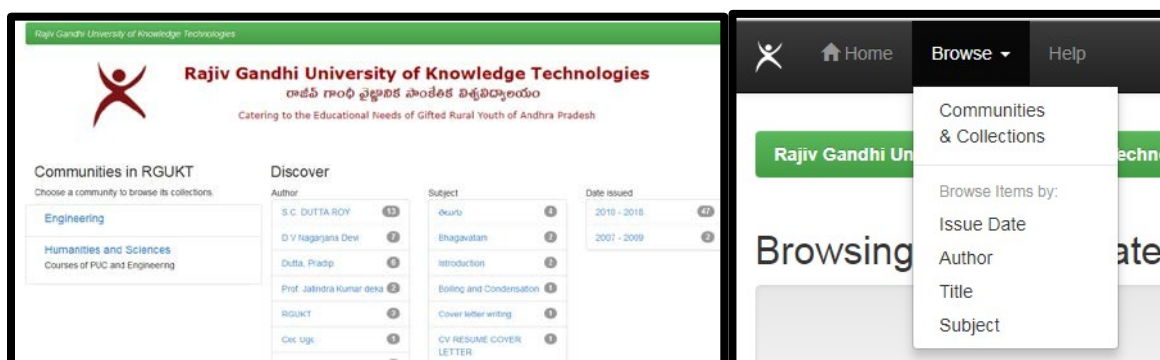
Like any other DSpace repository, RGUKT's DSpace site is divided into *communities* and *sub-communities* reflecting the university's structure of departments and centres. Communities contain collections, which are groupings of related content.

Each collection is composed of items submitted by RGUKT faculty and staff. Items are the basic elements of the archive, which can be browsed in any of the following ways:

²⁴ <http://www.rguktrkv.ac.in/Library>

²⁵ <http://117.254.89.186:8080/>

- **Browse by Communities and Collections** takes you through the communities in alphabetical order and allows you to see the sub-communities and collections within each community.
- **Browse by Issue Date** allows you to move through a list of all items in DSpace in reverse chronological order.
- **Browse by Author** allows you to move through an alphabetical list of all authors of items in DSpace.
- **Browse by Title** allows you to move through an alphabetical list of all titles of items in DSpace.
- **Browse by Subject** allows you to move through an alphabetical list of subjects assigned to items in DSpace.

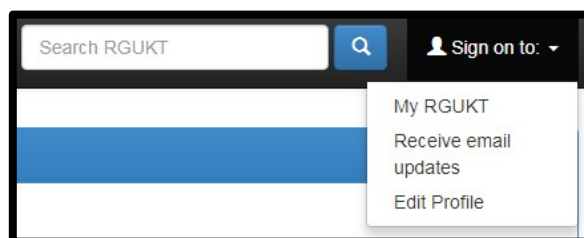


Search

You can search the RGUKT DSpace site using the search box at the top of the navigation bar. To limit your search to a specific community or collection, navigate to that community or collection and use the search bar on that page. Click on an item listed under “Item hits” to view or open its content.

Subscribe to E-Mail alerts

You can subscribe to receive daily e-mail alerts about new items added to the collections. You may subscribe to as many collections as you wish. To subscribe:



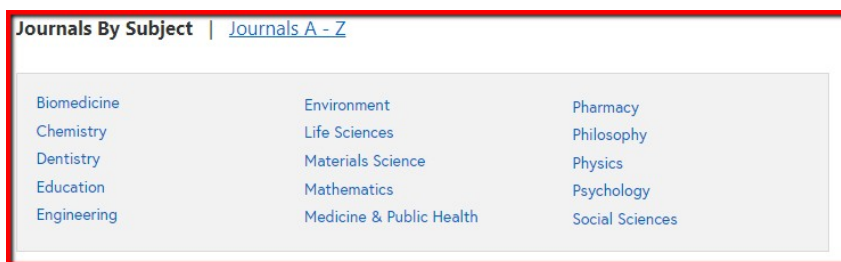
- Click on the “Sign on to” link in the navigation bar and again on “Receive email updates.”

- Click on “New user? Click here to register.”²⁶
- Enter your e-mail address and click on the “Register” button. You will receive an e-mail containing a special URL, or “token.”
- Visit the URL and fill out the form.
- Navigate to a collection for which you would like to receive e-mail alerts, and click on the “subscribe” button. Repeat for other collections.
- To edit your subscriptions, go to the “Subscribe” page.

Open access journals

Open access (OA) journals are peer-reviewed journals whose articles are free of charge and free of most copyright and licensing restrictions. OA journals are an important resource for students conducting literature searches to inform their research.

- **DOAJ:** Directory of Open Access Journals (www.doaj.org) is a community-curated online directory that indexes and provides access to high-quality,



open access, peer-reviewed journals. DOAJ lists all open access scientific and scholarly journals that use a quality control system to guarantee the quality of content.



- **BioMedCentral** (www.biomedcentral.com) is a publisher of 290 peer-reviewed OA journals.

Open educational resources







In addition to the RGUKT OA Repository resources and OA journal articles, you may use other open educational resources (OER) for your learning and research. “OER are teaching, learning, and research materials in any medium that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation

²⁶ <http://117.254.89.186:8080/register>

and redistribution by others” (Creative Commons²⁷). OER include full courses, lecture notes and slides, lesson plans, handouts, online tutorials, modules, textbooks, diagrams, podcasts, streaming videos, tests, software, and any other tools, materials or techniques used to support teaching, learning and access to knowledge.

Remember: Not all resources available online are OER.

Table 1. Creative Commons Basic Licence Components

	<p>CC BY. Attribution licence. This allows you to distribute, remix, tweak and build upon the work, even commercially, as long as you credit the original creator.</p>
	<p>CC BY-SA. Attribution-Share Alike licence. This lets you remix, tweak, and build upon the work even for commercial purposes, as long as you credit the creator and license your new creations under the identical terms.</p>
	<p>CC BY-NC Attribution-NonCommercial licence. This allows redistribution, commercial and non-commercial, as long as you pass it along unchanged and whole, with credit to the creator.</p>
	<p>CC BY-NC-SA Attribution-NonCommercial-ShareAlike licence. This allows you to remix, tweak, and build upon another’s work non-commercially, and although your new work must also acknowledge the creator and be non-commercial, you don’t have to license your derivative work on the same terms.</p>
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²⁷ <https://creativecommons.org/about/program-areas/education-oer/>

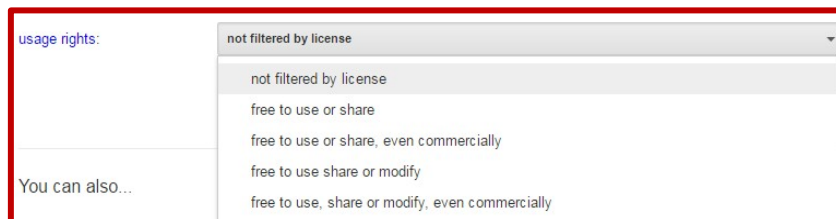
Almost everything that you find online is copyrighted. So even if a website does not give information about the copyright holder, by default someone holds the copyright. You therefore are not entitled to copy and use the information without acknowledgement. Moreover, some copyrighted materials can't be reused to create new, derivative materials.

However, you can reuse any material that comes with an open licence, for any legal purpose, with correct attribution. Your teachers may make use of many such OER relevant to your studies during the programme of your studies. You also can identify many relevant OER to learn and to help other students by compiling and remixing available OER in a topic. OER are normally identified through the use of a Creative Commons (CC) licence²⁸ that allows reuse and adaptation, without seeking permission from the copyright holder or author. Normally, licences without ND (no-derivatives) are considered OER (see Table 1).

Finding OER

You may find OER through Google Advanced Search, Creative Commons Search, OER Commons, Flickr Creative Commons, and Open Education Consortium, among other sources.

- **Google Advanced Search** allows you to search for CC material by keyword and refine your results to show only material available under certain CC licences.
 - Go to https://www.google.com/advanced_search.
 - In the “all these words” box, type what you want to search.
 - Scroll down to “usage rights” section.
 - Use the drop-down to choose the licence you want the content to have.
 - Click on the “Advanced Search” button.



- **CC Search** (<https://search.creativecommons.org>) offers convenient access to search services provided by other independent organisations. It is designed and hosted by Creative Commons and offers image, media, video, music and Web content search tools.
- **OER Commons** (<https://www.oercommons.org>) is a network of shared teaching and learning materials made freely available online. OER Commons can be used to find free-to-use teaching and learning content from around the world.

²⁸ <https://creativecommons.org/>

- **Open Education Consortium** (<http://www.oeconsortium.org/courses/search>) allows you to search for courses.

Finding images

Flickr, Google Images, Pixabay and Wikimedia Commons are some sources for finding OER images.

- **Flickr Creative Commons.** Many Flickr users share their work under a CC licence, and you can browse or search through content under each type of licence.
 - Navigate to <https://www.flickr.com/creativecommons/>.
 - Click “See more” under any type of CC collection.
 - Type your keyword in the search box/browse popular tags.
 - Click on the image you need.
 - Check the licence given below the image. If you see **Some rights reserved**, this means it is CC licensed and is safe to use. Click on “Some rights reserved” to learn about the CC licence and its reuse terms and conditions.
 - Click the **Download** icon to view different sizes options.
- **Google Images.** Google facilitates searching OER images.
 - Navigate to https://www.google.com/advanced_image_search.
 - In the “all these words” box, type what you want to search for.
 - Scroll down to “usage rights.”
 - Choose “free to use or share” or Tools (“Labelled for reuse”).
- **Wikimedia Commons:** Wikimedia Commons (<https://commons.wikimedia.org>) is a media repository created and maintained by volunteers. It provides a central repository for Creative Commons-licensed photographs, diagrams, animations, music, spoken text, video clips and all other sorts of media. Check the licence on the image description page before downloading.
- **Pixabay** (<https://pixabay.com/>) is a vibrant community of creative people sharing copyright-free images and videos. All contents are released under a CC0 licence, which makes them safe to use without asking for permission or giving credit to the artist — even for commercial purposes.

Open online courses

Explore the content of the following open online course providers:

- Open Learn , UK OU: <http://openlearn.open.ac.uk/course/index.php>

- CMU OLI: <http://oli.cmu.edu/teach-with-oli/review-our-free-open-courses/>
- Open Course Library: <http://opencourselibrary.org/>
- Saylor Academy: <https://learn.saylor.org/course/index.php?categoryid=2>
- Yale Open Courses: <http://oyc.yale.edu/>
- UCI Open Courses: <http://ocw.uci.edu/courses>
- OERu: <http://oeru.org/courses/>
- Lumen: <https://courses.lumenlearning.com/catalog/lumen>
- MIT OCW: <http://ocw.mit.edu/courses/find-by-topic/>
- Tufts OCW: <http://ocw.tufts.edu/Schools/1>
- John Hopkins OCW: <http://ocw.jhsph.edu/>

Sources of OER

Listed in Table 2 are some useful sources of OER. Click on each link to identify your course-relevant OER.

Table 2. Open textbook initiatives

Initiative	URL	Description
OpenStax (Rice University)	https://openstax.org/subjects	OpenStax is a non-profit based at Rice University started publishing our own line of free, peer-reviewed textbooks in 2012. OpenStax textbooks are written by professional content developers who are experts in their fields and undergo a rigorous peer review process.
BC Open Textbooks	http://open.bccampus.ca/find-open-textbooks/	The BC Open Textbook Project began in on a British Columbia campus in 2012.
University of Minnesota Open Textbooks	http://open.umn.edu/opentextbooks/	Supported by the Center for Open Education and the Open Textbook Network.
Open SUNY Textbooks: State University of New York libraries	https://textbooks.opensuny.org/browse-by-subject/	Open SUNY Textbooks is an open access textbook publishing initiative established by State University of New York libraries.
Intech Science, Technology & Medicine	http://www.intechopen.com/	The world's leading publisher of open access books, built by scientists, for scientists.
India CK-12 Flexbooks	https://www.ck12.org/cbse/	CBSE Maths, Physics, Chemistry and Biology flexbooks,
Global Text Project	http://globaltext.terry.uga.edu/books	The Global Text Project publishes electronic texts for students in the developing world. It also maintains a database of links to books for such students.

Indian OER initiatives

The following are some open education initiatives in India:

- NPTEL: National Programme on Technology Enhanced Learning (<http://nptel.ac.in/>)
- Virtual Labs: Remote access to labs in science and engineering (<http://www.vlab.co.in/>)
- IIT Bombay Spoken Tutorial: Learn with FOSS (free and open source software, <http://spoken-tutorial.org/>)
- e-PG Pathshala (MHRD & NME-ICT): E-content in 71 subjects at PG level (<http://epgp.inflibnet.ac.in/about.php>)
- Institute of Lifelong Learning, University of Delhi (<http://vle.du.ac.in/>)

Citing OER

To maintain academic honesty, you should attribute the work to the original creator when you use it. You cannot use something without crediting its source (as you would any resource that you use in your work) just because it is an OER. Not citing sources is plagiarism.

If you are using a CC-licensed image in a presentation, check to see who created it, and include this information in a note with the image in your presentation. Use the acronym **TASL** to cite an OER:

Title – Copy the title of the work to be adopted.

Author – Copy author's name and webpage link, if available.

Source – Hyperlink the title to the original source.

License – Copy the CC licence name and hyperlink to the CC licence deed page.

RGUKT's library services and resources help you to access and use not only the in-house stored information resources but also various external information resources. Keep exploring and using the available information resources, and share your own resources of good quality with your library staff to enrich your DSpace repository.

Chapter 7: Avoiding Plagiarism

You can find anything and everything on the Web. This includes not only information and knowledge that you want to acquire but also readymade solutions to assignments given to students. You can find articles, essays, papers, solutions to textbook problems, etc. However, you must know that it is illegal and unethical to copy someone else's work and present as your own without appropriate acknowledgement. Such behaviour will land you in serious trouble. Not only will it affect your grades, but sometimes your work/assignments may be totally rejected, leading to non-completion of a course. Hence, developing good academic writing habits by avoiding plagiarism is critical to becoming a successful student at RGUKT.

What is plagiarism?

Plagiarism is the practice of using someone's work or ideas, as a whole or in part without proper citation, in your work and submitting it as yours. This can include copying the exact content or paraphrasing or reordering and reorganising the content. All of these would qualify as plagiarism unless it is common knowledge that is known to everyone.

Definitions of plagiarism

Plagiarism is the “wrongful appropriation” and “stealing and publishing” of another author's “language, thoughts, ideas or expressions” and the representation of them as one's own original work. Plagiarism is considered academic dishonesty and a breach of journalistic ethics. It is subject to sanctions such as penalties, suspension and even expulsion from school or work.²⁹

Plagiarism is presenting someone else's work or ideas as your own, with or without their consent, by incorporating it into your work without full acknowledgement. All published and unpublished material, whether in manuscript, printed or electronic form, is covered under this definition.³⁰

According to the Merriam-Webster online dictionary, to “plagiarize” means:

- to steal and pass off (the ideas or words of another) as one's own
- to use (another's production) without crediting the source
- to commit literary theft
- to present as new and original an idea or product derived from an existing source

²⁹ <https://en.wikipedia.org/wiki/Plagiarism>

³⁰ <http://www.ox.ac.uk/students/academic/guidance/skills/plagiarism>

Types of plagiarism

Intentional plagiarism: Intentional plagiarism is the deliberate attempt to present another's information or creation as one's own. A Web search or any free plagiarism-checking tool can identify this type of plagiarism. It can be word for word or just a copy and paste of information.

Accidental plagiarism: Accidental or unintentional plagiarism can happen through failure to read or understand a plagiarism policy or disregard for the appropriate writing procedures. It includes:

- forgetting to do citations
- failing to put the extracted information in one's own words
- failing to reference the extracted material

Paraphrasing

Paraphrasing involves rewording or restating an idea from any other source. This is also considered plagiarism if not cited, because it is still stealing information. Summarising is another common method — a narration, shorter overview or synopsis. Again, to do so without proper attribution is plagiarism.

Patchwork writing or patchwriting

Poor paraphrasing makes an article look like a patchwork of original sources. We rely on copy-paste technology because it is easy to use. Copying information is good to some extent, but it may result in statements that are not easily understood. This does not demonstrate one's original thinking, and patchwork is also plagiarism.

Plagiarism in online education

The growth of online education requires academic integrity to overthrow the traditional classroom approach. Plagiarism is more common in an online learning environment. It may, in fact, be easier to detect and prevent plagiarism in online learning because, in contrast to campus-based programs, online courses rely exclusively on the electronic submission of all written work. That said, student identity authentication has been a major concern for online educators. This issue can be addressed through the use of human proctors or webcams to verify the identity of students taking exams.

Tools for detecting plagiarism

The new generation of plagiarism detection tools and applications are giant search engines. They compare student work to materials published online and can identify sections that

may require some form of citation. Some tools give an originality score and may even provide guidance on how to cite sources in keeping with common academic styles such as MLA, Chicago and APA. Plagiarism detection services are very good at identifying content that should be cited, but they aren't designed to improve the quality of the research or of the writing itself.

Some of the popular plagiarism detection software platforms are:

- <http://www.copyscape.com/> – Checks plagiarism across web content such as articles, blogs, etc.
- <https://www.grammarly.com/> – To identify and cite dictionary definitions.
- <http://www.ithenticate.com/> – Ensures that sources are properly cited. Mostly used for research papers.
- <https://www.turnitin.com/> – Gives originality score and marks the sections that should be cited.

Common knowledge exemption

Plagiarism applies to ideas that are unique or that belong to an author. Facts and general information are common knowledge and need not be cited, but analysis of topics requires citations. The two criteria that are most commonly used in deciding whether or not something is common knowledge are: the fact can be found in numerous places and ubiquitously; and it is likely to be known by a lot of people. Ideally, both conditions are true. A third criterion sometimes used is whether the information can be easily found in a general reference source.

Penalties for plagiarism

In an academic sense, plagiarism is considered an unforgivable act as it can have a negative impact on the institution. It may result in a candidate's expulsion or a failing grade or another punishment according to the institution's policies. An honour code must be present, and learners must abide by that code. It is important to realise that plagiarism is technically not subject to civil law; it is an ethical violation subject to institutional review and grading. Plagiarism cases turn into copyright breach if the copyright holder believes that his/her economic rights have been violated due to plagiarism.

RGUKT follows the plagiarism guidelines issued by the University Grants Commission. These guidelines are mentioned in the “Academic Integrity and Prevention of Plagiarism in Higher Education Institutions Regulations 2017.”³¹

³¹ https://www.ugc.ac.in/pdfnews/8864815_UGC-Public-Notice-on-Draft-UGC-Regulations,-2017.pdf

How to Avoid Plagiarism

To address this irregularity in education, one option is to discourage plagiarism amongst students. However, universities have the responsibility to educate their students on plagiarism. Most students are unaware of plagiarism and the consequences when someone is caught plagiarizing. An academic culture that places rewards above knowledge is also problematic. A genuinely holistic approach would involve promoting integrity in every aspect of the academic enterprise, including assessment practices, curriculum design and plagiarism policies. There must be targeted support in courses and at every level for students, and professional training for staff.

Universities can avoid plagiarism by having plagiarism prevention and detection systems in place for students. Also, students must know that it is illegal and unethical to copy someone else's work without appropriate acknowledgement and present it as their own, that plagiarism will have serious consequences, and that developing good academic writing habits that include avoiding plagiarism is critical for becoming a successful student.

For additional information about how to avoid plagiarism, see https://library.csusm.edu/plagiarism/howtoavoid/how_avoid_common.htm.

About the Editor and Authors

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NOTES



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