UNIVERSITAS NEGERI YOGYAKARTA
FACULTY OF MATHEMATICS AND NATURAL SCIENCES
DEPARTMENT OF CHEMISTRY EDUCATION
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Bachelor of Education in Chemistry   **MODULE HANDBOOK**

Module name:	**Entrepreneurship in IT-Based Learning**
Module level, if applicable:	Undergraduate
Code:	MPK 6218
Sub-heading, if applicable:	-
Classes, if applicable:	-
Semester:	Odd
Module coordinator:	Dr. Das Salirawati
Lecturer(s):	Jaslin Ikhsan, Ph.D
Language:	Bahasa Indonesia
Classification within the curriculum:	Elective Course
Teaching format / class hours per week during the semester:	Lectures: 100 minutes lectures, 120 minutes structured activities and 120 minutes individual study per week
Workload:	Total workload of the activity is 136 hours per semester which consist of 100 minutes lectures, 120 minutes structured activities, 120 minutes individual study per week.
Credit points:	2SKS (3.28 ECTS)
Prerequisites course(s):	-
Course Outcomes	After taking this course the students are expected to be able to:
	CO1 — demonstrate an attitude of responsibility and independence in carrying out the given tasks as prospective chemistry teacher in high school, and understand the principles of entrepreneurship
	CO2 — describe the characteristics and develop Chemistry learning media for Computer Assisted Instruction (CAI), Web-Based Learning (WBL), and Mobile-Based Learning (MBL) including: CAI 5, CAI 6, CAI 7, MBL 9, MBL 10, MBL 11 , and WBL 8; understand the steps to validate Chemistry learning media 12 and understand the procedures for producing Chemistry learning media 13; and understand the tips for marketing Chemistry learning media
	CO3 — understand the role of ICT as an alternative solution to the problem of effective Chemistry learning in high school / vocational school based on the results of field observations and studies of relevant research results
Content:	Through this course students are prepared to design and produce IT-based learning media in the form of multimedia applications, games, virtual labs. The learning materials include identification of chemistry learning problems in high school and university, identification of alternative learning

	solutions through IT-based media, identification of CAI learning support media, website-based learning, and mobile-based learning, development of audio-visual learning media, web 2.0-based learning media and html5, and Android, IOS-based media, media validation, media production, and media marketing.
Study/exam achievements:	Attitude assessment is carried out at each meeting by observation and / or self-assessment techniques using the assumption that basically every student has a good attitude. The student is given a value of very good or not good attitude if they show it significantly compared to other students in general. The result of attitude assessment is not a component of the final grades, but as one of the requirements to pass the course. Students will pass this course if at least they show a good attitude. The final mark will be weighted as follows:

No	CO	Assessment Object	Assessment Technique	Weight
1	CO1, CO2 and CO3	Performance Individual and Group Assignment	Observation Presentation / written assignment	10% 60%
		Final Exam	Written test	30%
			Total	100%

Forms of media:	Board and Board markers, LCD Projector, Laptop/Computer, *Power Point Slide, Flash CS6, Sigil and/of Flipper, Construct2*
References:	**Handbooks:** A. Pathak, R. P. & Chaudhary, J. 2012. *Educational Technology*:Pearson. B. Mayer, R. E. 2001. *Multimedia Learning:* Cambridge University Press. C. Azhar Arsyad. (1997). Media Pengajaran. Jakarta : Grafindo. D. Arief S. Sadiman, dkk. (1993). Media Pendidikan. Pengertian, Pengembangan dan Pemanfaatannya. Jakarta: Pustekkom dan PT Raja Grafindo Persada. **Suggested Readings:** A. Jaslin Ikhsan, Herman, dan Dian Susetyaningtyas. (2009). Practices and Lessons Learned from Branding of Indonesian Education Institutions through Open and Distance Learning (ODL), International Conference of Branding in Higher Education, SEAMEO RETRAC, Vietnam. B. Jaslin Ikhsan dan Ayu Asih. (2009).Exploring the ideas of Creating Higher Education Common Space in Indonesia, International Pre- conference on Harmonization of Higher Education, SEAMEO RIHED, Bangkok-Thailand. C. Jaslin Ikhsan, Herman dan Adie Erar Yusuf, (2009). Students Perception on Written Material (Modules) in PJJ PGSD, International Conference on Open and Distance Learning, PUSTEKKOM, Yogyakarta.

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D. Jaslin Ikhsan (2011). Impelementasi TIK dalam Pembelajaran di Sekolah Seminar Nasional Teknologi Pembelajaran, Universitas Batu Raja, Palembang.

E. Jaslin Ikhsan dan Hafid Setyo Hadi, (2012). Strategi Penyebaran Konten Pendidikan Berbasis Digital Video Broadcasting over Satellite, Seminar Nasional (ISBN. 978-602-9461-06-0), PPS UNY Yogyakarta.

F. Jaslin Ikhsan (2012). Peningkatan Kualitas Guru MIPA melalui Pembelajaran Berbasis Komunitas dan Berazas Sharing, Seminar Nasional FMIPA UNY Yogyakarta, (ISBN: 978-979-99314-6-7).

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H. Arini Fadhilah dan Jaslin Ikhsan, (2013). The Development of Java 2 Micro Edition based Mobile Chemistry Encyclopedia 'Chemistclopedia' as Independent Learning Media for Senior High School Students International PostGraduate Conference on Science and Mathematics (IPCSM2013), UPSI. Tanjung Malim, Malaysia.

I. Melita Rachma dan Jaslin Ikhsan, (2013). The Development of Java 2 Micro Edition based Chemistclopedia Application on Chemical Elements for Senior High School Students International PostGraduate Conference on Science and Mathematics (IPCSM2013), UPSI, Tanjung Malim, Malaysia.

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M. Septi Riyanningsih dan Jaslin Ikhsan , (2013). The Development of Character-Based Mobile Game "Robochem" the Reaction Rate Topic and the Response of Grade 11th Students to the Game, Konferensi Internasional LPPM UNY Yogyakarta

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	N. Septi Riyanningsih dan Jaslin Ikhsan , (2013). The Development of Character-Based Mobile Game "Robochem" the Reaction Rate Topic and the Response of Grade 11th Students to the Game, Konferensi Internasional LPPM UNY Yogyakarta (ICERI2013) (ISBN. l978-6027981-04-1).
	O. Amallia Nugraheni dan Jaslin Ikhsan , (2013). The Development and its Impact of Java 2 Micro Edition Based Media for the Mobile Encyclopedia to Senior High School Student Learning Internasional LPPM UNY Yogyakarta, (ICERI2013), (ISBN. l978-602-7981-041).
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	Q. Hesty Parbuntari, dan Jaslin Ikhsan , (2014). The Use of Hybrid Multimodal Learning on Chemistry at Senior High School to Improve Students' Motivation Konferensi Internasional (ICRIEMS2014), ISBN. 978-979-99314-8-1, FMIPA UNY Yogyakarta.
	R. Nuke Ajeng Prabawati, dan Jaslin Ikhsan (2014). The Use of Web-Based Assistance in Multimodal Chemistry Learning at Senior High School to Improve Students' Motivation Konferensi Internasional (ICRIEMS2014), ISBN. 978-979-99314-8-1, FMIPA UNY Yogyakarta.
	S. Yogo Dwi Prasetyo, Jaslin Ikhsan, dan Rr. Lis Permana Sari, (2014). The Development of Android-Based Mobile Learning Media as Chemistry Learning for Senior High School On Acid Base, Buffer Solution, and Salt Hydrolysis Konferensi Internasional (ICRIEMS2014), ISBN. 978-979-99314-8-1, FMIPA UNY Yogyakarta.
	T. Resti Yektyastuti, Jaslin Ikhsan, dan Rr. Lis Permana Sari, (2014. The Development of Android Mobile Game as Senior High School Learning Media on Rate Reaction and Chemical Equilibrium, Konferensi Internasional (ICRIEMS2014), ISBN. 978-979-99314-8-1, FMIPA UNY Yogyakarta.
	U. Jaslin Ikhsan, M. Pranjoto Utomo, Sunarto, Erfan Priyambodo, Susila Kristianingrum, (2014). Upaya Peningkatan Kompetensi TIK Guru Kimia SMA/MA Di Era Digital Melalui Insert-CT (In-Service Training for Chemistry Teachers) , Seminar Nasional LPPM UNY ISBN. 978-979-562-029-7.
	V. Jaslin Ikhsan, Hafid Setyo Hadi, (2015), Delivering Science-Engineering Virtual Labs Using the New Web Technologies (HTML5), Konferensi Internasional (ICERI2015).
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X. Paksi Manggala Putra, Jaslin Ikhsan, (2015). Development Of Android Mobile Game "The Professor" As Chemistry Learning Media In Senior High School On Hydrocarbon And Petroleum, Konferensi Internasional (ICERI2015).

Y. Paksi Manggala Putra, Jaslin Ikhsan, (2015). Development Of Android Mobile Game "The Professor" As Chemistry Learning Media In Senior High School On Hydrocarbon And Petroleum, Konferensi Internasional (ICERI2015).</td></tr>
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PLO and CO mapping

	PLO					
	Attitude		**Knowledge**	**Specific Skill**	**General Skill**	
	PLO1	**PLO2**	**PLO3**	**PLO4**	**PLO5**	**PLO6**
CO1		√				
CO2			√			
CO3				√		