Exhibit 2.1-1-3 Program Specification 2012

College of Creative Industry
Bachelor of Science Program in Gems and Jewelry

Degree title

Full title: Bachelor of Science (Gems and Jewelry)
Abbreviation**:** B**.**Sc**.** (Gems and Jewelry)

Philosophy

Create the knowledge towards the gems and jewelry industry using technology and intelligent application of material sciences

Program Objectives

1. The program aims to create graduates who morally apply the scientific knowledge in material sciences and the expertise in gemology and jewelry production to their career
2. The program aims to create graduates who can use material science, technology, communication, and management knowledge related to gems and jewelry to operate in all dimensions of production and promote Thai wisdom and environmentally friendly products for economic and social development

Program Format

The program is conducted in Thai

Prospective Career after Graduation

1 Gems and jewelry business person
2 Production supervisor for gems and jewelry
3 Gems and jewelry designer
4 Gems and jewelry appraiser
5 Marketing and sales personnel in gems and jewelry business
6 Researcher in gems and jewelry institute
7 Teacher and lecturer in gems and jewelry
8 Material analyst

Teaching duration

2012 - 2014

First semester	June – October
Second semester	November – February
Summer semester	March – May

2015 - 2016

First semester	August - December
Second semester	January – May
Summer semester	June – August

Criteria for Admission

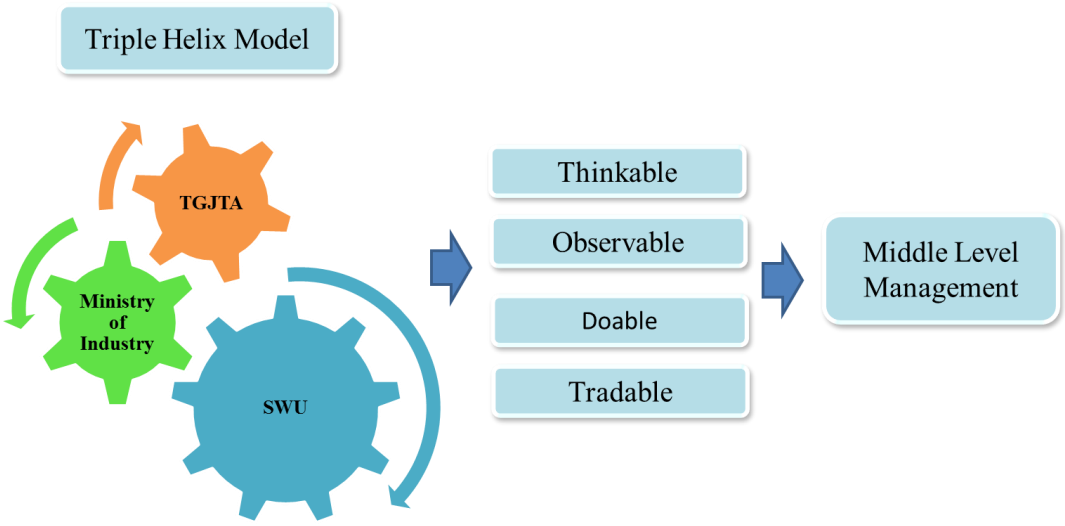
1 Completed the high school (M.6) in science and math concentration or its equivalent
2 Other qualities as per Srinakharinwirot University’s announcement

Number, channels and criteria for admissions

1. 60 students will be admitted annually
2. 3 admissions channels namely

1	Quota for specific stakeholders (Gems and Jewelry Traders Association, schools in SWU network, and schools in educational district 7)
2	Direct admission using NIETS score and academic interview
3	General admission using NIETS score and academic interview

Program Framework



Student's special quality	Teaching strategy and student's activity
Students possess the special qualities according to SWU's identities including life-long learning, thinkable and doable, hardworking, knowing a time and a place, public-minded, able to communicate, humility, good personality, and complete with arts and sciences.	- Incorporate all 9 identities in the teaching relating them to the study, work, and daily life - Promote students in doing research and joining the activities inside and outside of classes in order for them to practice and development themselves to achieve 9 identities Organise the activities to support students in discussion about how each course stimulates them to develop the identities related to leadership and responsibility on their own work - Provide an opportunity for carrying out a research project in order for the students to practice and reproduce the research process in reality

Curriculum Structure

Number of credits for the entire program

Total credits over the 4-year bachelor's degree is no less than 140 credits detailing in the table below

Course	credits
1. General education courses	**30**
2. Specific courses	**104**
2.1 Core courses	26
2.1.1 Basic science and mathematics courses	18
2.1.2 Major specific courses	8
2.2 Specific courses	**78**
2.2.1 Learning skill courses	6
2.2.2 Compulsory specific courses	62
2.2.3 Elective specific courses	10
3. Free elective courses **No less than**	**6**
Total	**140** **126**

Study plan AY2012

Year 1 Semester 1	credits	Year 1 Semester 2	credits
General education courses	**9 credits**	**General education courses**	**9 credits**
SWU 121 English for Effective Communication I or SWU 123 English for International Communication I	3 (2-2-5)	SWU 111 Thai for Communication or SWU 112 Thai Literary Review	3 (2-2-5)
SWU 141 Information Literacy Skills	3 (2-2-5)	SWU 122 English for Effective Communication II or SWU 124 English for International Communication II	3 (2-2-5)
SWU 142 Science for Life Quality Development and Environment	3 (2-2-5)	SWU 151 General education courses for Human Development	3 (2-2-5)
Basic science and mathematics courses	**6 credits**	**Basic science and mathematics courses**	**4 credits**
MA 115 Mathematics I	3(3-0-6)	MA 116 Mathematics II	3(3-0-6)
PY 100 General Physics I	3(3-0-6)	PY 180 General Physics Laboratory I	1(0-2-1)
Compulsory specific course	**4 credits**	**Compulsory specific course**	**6 credits**
GJ 151 Introduction to Geology	3(2-2-5)	GJ 152 Crystallography	2(1-2-3)
GJ 181 Business Ethic and Good Governance for Gems and Jewelry	1(1-0-2)	GJ 131 Jewelry Design for Manufacturing I	2(1-3-2)
		GJ 161 Colored Stones and Colored Stone Deposits	2(2-0-4)
Total credits	**19 credits**	**Total credits**	**19 credits**

Year 2 Semester 1	credits	Year 2 Semester 2	credits
General education courses	**3 credits**	**General education courses**	**3 credits**
SWU 251 Man and Society	3 (2-2-5)	SWU 252 Aesthetics for Life	3(2-2-5)
Basic science and mathematics courses	**8 credits**	**Major specific courses**	**4 credits**
BI 101 Biology I	3(3-0-6)	CH 101 Principles of Chemistry	3(3-0-6)
BI 191 Biology Laboratory I	1(0-2-1)	CH 191 Principles of Chemistry Laboratory	1(0-2-1)
CH 100 General Chemistry	3(3-0-6)	**Compulsory specific courses**	**12 credits**
CH 190 General Chemistry Laboratory	1(0-2-1)	GJ 213 Materials Processing	2(2-0-4)
Compulsory specific courses	**8 credits**	GJ 214 Materials Science Laboratory II	1(0-2-1)
GJ 211 Introduction to Materials Science	2(2-0-4)	GJ 235 Jewelry Making I	1(1-0-2)
GJ 212 Materials Science Laboratory I	1(0-2-1)	GJ 236 Jewelry Making Laboratory I	2(0-4-2)
GJ 255 Mineralogy	3 (2-2-5)	GJ 256 Optical Mineralogy	2(1-2-3)
GJ 281 Gems and Jewelry Business Administration	2(2-0-4)	GJ 215 Physical Metallurgy for Jewelry	2(2-0-4)
		GJ 282 Occupational Health and Safety in Industry	2(2-0-4)
Total credits	**19 credits**	**Total credits**	**19 credits**

Year 3 Semester 1	credits	Year 3 Semester 2	credits
General education courses	**3 credits**	**General education courses**	**3 credits**
SWU 351 Personality Development	3 (2-2-5)	SWU 371 Creativity, Innovation and Technology	3(2-2-5)
Learning skill courses	**3 credits**	**Learning skill courses**	**3 credits**
SCI 301 English for Science I	3(3-0-6)	SCI 302 English for Science II	3(3-0-6)
Compulsory specific courses	**13 credits**	**Major specific courses**	**4 credits**
GJ 316 Polymer Materials for Jewelry	2(2-0-4)	ST 243 Statistical Methods	4(4-1-7)
GJ 317 Introduction to Ceramic Materials for Jewelry	2(2-0-4)	**Compulsory specific courses**	**10 credits**
GJ 331 Jewelry Making Laboratory II	1(1-0-2)	GJ 335 Plating and Coating	1(1-0-2)
GJ 332 Jewelry Making II	2(0-4-2)	GJ 336 Plating and Coating Laboratory	2(0-4-2)
GJ 333 Introduction to Jewelry Casting	1(1-0-2)	GJ 362 Gem Identification II	3(1-5-3)
GJ 334 Jewelry Casting Laboratory	2(0-4-2)	GJ 363 Diamond and Diamond Grading	2(1-3-2)
GJ 361 Gem Identification I	3(1-5-3)	GJ 371 Gemstone Cutting and Polishing I	2(1-3-2)
Total credits	**19 credits**	**Total credits**	**20 credits**

Year 4 Semester 1	credits	Year 4 Semester 2	credits
Compulsory specific courses	**3 credits**	**Compulsory specific courses**	**5 credits**
GJ 401 Seminar in Gems and Jewelry	1(1-0-2)	GJ 462 Colored Stone Grading and Appraisal	2(1-3-2)
GJ 491 Gems and Jewelry Quality Control	2(2-0-4)	GJ 402 Gems and Jewelry Project	2(0-4-2)
GJ 409 Internship*	2 (0-4-2)		
Elective specific courses	**8 credits**	**Elective specific courses**	**2 credits**
No less than 8 credits		No less than 2 credits	
Free elective courses	**3 credits**	**Free elective courses**	**3 credits**
No less than	3 credits	No less than	3 credits
Total credits	**16 credits**	**Total credits**	**9 credits**

Remark *Internship for students is during the summer of Year 3 which requires no less than 300 hours of work