AUN - QA
Self Assessment Report

B.S. Water Resources Engineering
Faculty of Engineering
University of Brawijaya
2016

By: Ir. Mohammad Sholichin, MT., Ph.D
(Head of Department)

OUTLINE

- BACKGROUND
- ORGANIZATIONAL STRUCTURE
- VISION – MISION
- LEARNING OUTCOME
- ACADEMIC STAFF PROFILE
- STUDENT PERFORMANCE
- INFRASTRUCTURE
- GRADUATE PROFILE
- BRIEF ACHIVEMENT

BACKGROUND

ASEAN Economic Community

BACKGROUND

- **"Self Assessment Report" (SAR) document is prepared for the ASEAN University Network – Quality Assurance Assessment for Bachelor Science Water Resources Enggineering at Universitas Brawijaya**

- **Bachelor Science of Water Resources Engineering (BSWRE) which was established since 1976 is the first and leading institutions in the field of water resources engineering in Indonesia**

BACKGROUND

BSWRE is established in 1976

Ministry of Education Grant year 2001 to 2004 and 2007-2009

Awarded National Accreditation "A"
Since 2004, 2009-20014 and 2015- 2020

CERTIFIED BY ISO 9001:2008 SINCE 2011

UBAQA *(Universitas Brawijaya Annual Quality Assurance)* Award since 2009, 2010 and 2011

Holding biannual international conference with the name of *"International Conference of Water Resources Development and Environmental Protection " (ICWRDEP) for the first in 2015.*

Research cooperation activities which obtained by the lecturers and departments at national level (Kemristekdikti) and international level (JICA) routinely

in 2015 there was a visiting lecture from University of Miyazaki Japan and in this year from University Sains Malaysia (USM), Malaysia

The improvement of student quality continues conducted in 2016 by sending 7 students to Tokyo-Miyazaki Japan in the activities of Sakura Science Program.

The student of BSWRE has an advantage in its field, the last had won the first champion of national dam design competition in 2015 at the University of Mataram.

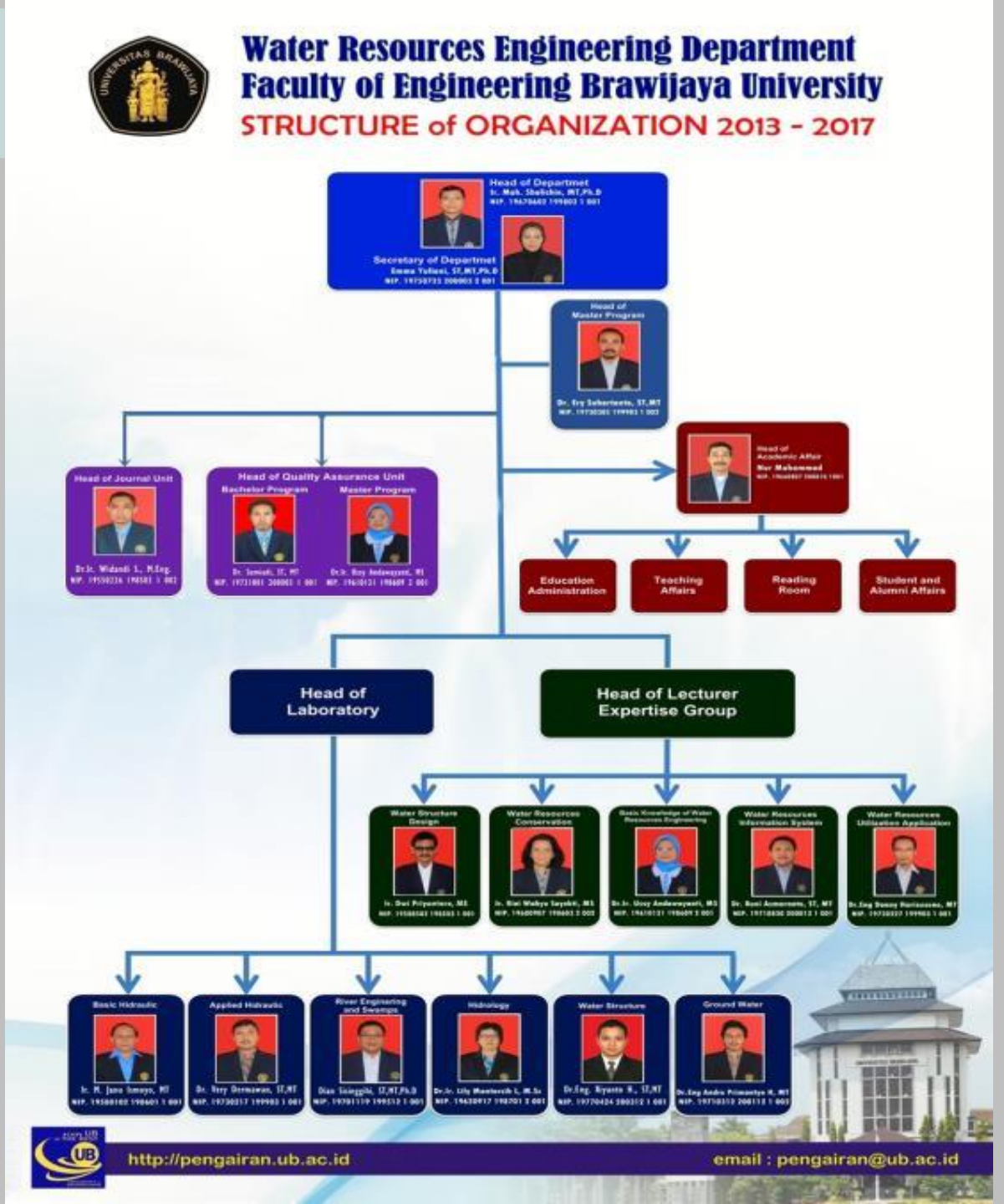
The first, second, and third champion in national irrigation network planning competition at University of Muhammadiyah Makassar in 2016

BSWRE also active (improvement of scientific competence) in Indonesian Hydraulic Engineer Association (IHEA), National Comitte of Dam Safety, or INACOLD, 2016

Fourth prize and the best presenter in national scientific writing competition entitled spores (infiltration wells, building alternative water conservation land .

A place of reference in the dam construction in Indonesia → Especially hydraulic physical model of dam

ORGANIZATION STRUCTURE



VISION

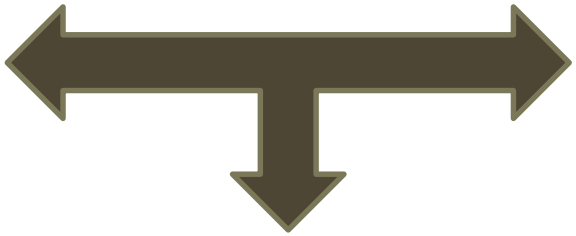
Water Resources Engineering Department become an institution of **higher education in the field of water resources** that excel at both regional and international levels, and produce graduates with good morals, competent, and innovative, through the *TRI DHARMA PERGURUAN TINGGI* / Three Pillars of Higher Education (Education, Research, and Community Services)

MISSION

1. Organize quality education to produce graduates with academic ability and applied competency in environmentally-based water resources field.
2. Organize research in the development and dissemination of knowledge and technology, and implement community service activities, especially in the areas of utilization and management of water resources for peoples's welfare

LEARNING OUTCOMES FORMULATION PROCESS

SWOT ANALYSIS



Tracer study
Need Assessment, Market signal

1. **Graduate Attributes**
   - **Learning Outcome of Study Program**
2. **Knowledge Block**
   - **Formulated Into BSWRE Curriculum**
3. **Translated into Courses Learning Outcome**
   - **Distributed into Each Semester**
4. **Learning Method**

Expected Learning Outcomes

ELO 1	• Ability to apply mathematics, science, information technology, and engineering practice in water resources engineering.
ELO 2	• Ability to manage and solve water resources engineering problems and analyzing the possible problem solving.
ELO 3	• Effective managerial ability on the field of project management and activity standardization.
ELO 4	• Ability to apply ethics and moral considerations in professional practice.
ELO 5	• Ability to communicate effectively and efficiently.
ELO 6	• Ability in education and training and life-long learning
ELO 7	• Ability of self-awareness and team work.

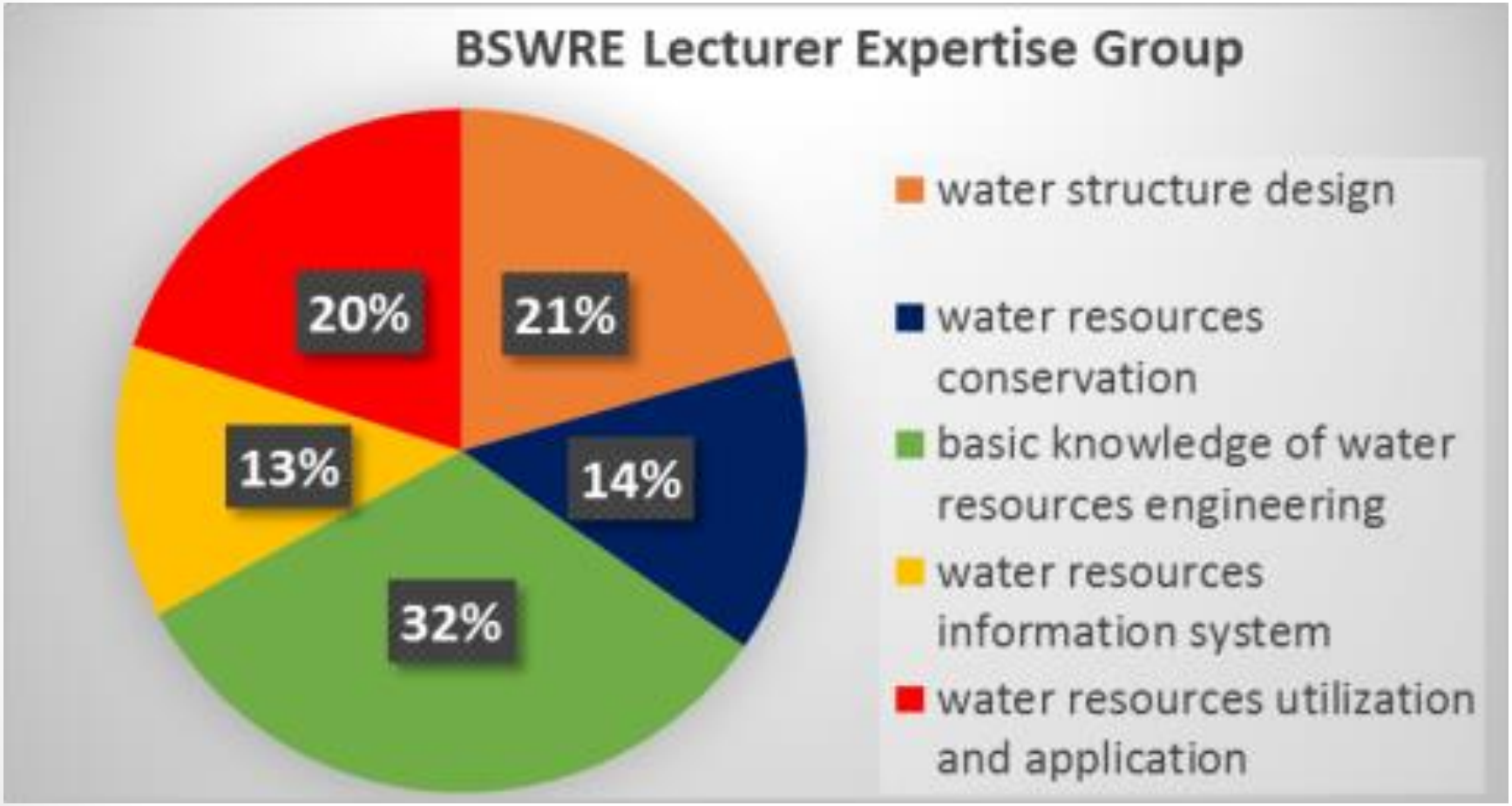
The Coverage of BSWRE's ELO

No	Outcomes Classification	Knowledge block	Credits	ELOs
1.	Other Competence/ General national curriculum (OC)	Mathematic, Indonesian Language	8	1, 7
2.	Design Competence on Water Resources Engineering Infrastructure (DCWREI)	Hydrology, Hydraulic, Soil Mechanic, Irrigation, Steel Structure, Concrete Structure, Drainage and Dam.	67	2 , 3
3	Development and Management Competence on Water Resources Engineering (DMCWRE)	Water Quality, Sediment, River Morphology, Reclamation, Urban Planning, Water Management, Power Plant, Waste Water Technology	36	2 , 3
4.	Supporting Competence (SC)	Statistic, civil society, Religion, etic, Field project, Skripsi	48	4, 5, 6

Structure of Curriculum of BSWRE

Course Group Competence	Semester								Credit Unit	(%)
	1	2	3	4	5	6	7	8		
Other Competence/ General national curriculum (OC)	X	X							8	5,5
Design Competence on Water Resources Engineering Infrastructure (DCWREI)		X	X	X	X	X			67	46,5
Development and Management Competence on Water Resources Engineering (DMCWRE)		X	X	X	X	X			36	25,0
Supporting Competence (SC)	X	X	X	X	X	X	X	X	48	33,3

BSWRE Lecturer Expertise Group



Teaching and Learning Strategy; (SCL & PBL)

No	ELO	Teaching Method	Evaluation
1	Ability to apply mathematics, science, information technology, and engineering practice in water resources engineering.	Lecture, Tutorial, group discussion, laboratory works, field practical work , and guest lecture	Examination (quiz, final-exam), Laboratory reports, assignment reports, oral presentation and quizzes
2	Ability to manage and solve water resources engineering problems and analyzing the possible problem solving.		
3	Effective managerial ability on the field of project management and activity standardization.	Lecture, tutorial, group discussion, and expert lecture	Examination, assignment reports, oral presentation and quizzes
4	Ability to apply ethics and moral considerations in professional practice.		
5	Ability to communicate effectively and efficiently.		
6	Ability in education and training and life-long learning.		
7	Ability of self-awareness and team work.		

Student Centre Learning & Problem Based Learning

Class Session

Field Study in Dam site

Guest Lecture in Hall Room

Laboratory works

Teaching and Learning Strategy

Group Discussion

Field work in rivers site

National Study Field Program

Soft Skill with Event Project "Pekan DAS Brantas"

ACADEMIC STAFF PROFILE

Category	Q	Age (year)	Master	Ph.D	Prof	Target 2020		
						Master	PhD	Prof
Professor	2	60	0	0	2	0		8
Senior Lecturer / Ass.Prof	6	50-40	6	0	0	6	6	0
	7	40 -35	0	8	0	0	8	0
Lecturer	8	35 - 30	0	8	0	0	4	0
Ass. Lecturer	11	>30	9	1	0	6	0	0
Total	**34**		**15**	**17**	**2**	**12**	**18**	**8**
			34			**38**		

Plan for 4 year :

- **Recruitment 4 New lectures**
- **An increasing number of professor**
- **An increasing number of PhD academic staff**

Staff/student ratio and staff/graduate ratio

Academic Year	Total of Teaching Staff	Number of Students	Number of Graduates	Number of Student per Total Teaching Staff
2012-13	35	599	61	17 : 1
2013-14	34	606	101	18 : 1
2014-15	36	621	70	17 : 1
2015-16	34	672	94	19 : 1

Plan for 4 next year :

- **Recruitment 4 New lectures from 34 to 38**
- **increasing number of Graduate from 120 to 130 student**
- **increasing the percentage (%) the number of graduating on time**

SUPPORTING STAFF

No	Qualifications / Expertise	Total
1	According to Qualifications	17
	• Masters	0
	• BA	7
	• Dipl.	3
	• Others	7

No	Qualifications / Expertise	Total
2	According to Expertise	17
	• Librarians	1
	• Laboratory staff / Technician/ Operator	6
	• Administrator	10

Plan for 4 next year :
Recruitment 3 New supporting staff from 17 to 20 persons increasing number of diploma to BA from 7 to 10 persons

STUDENT ADVICE AND SUPPORT

Beside of Academic Supervision by Lecturer for each student, there are also student advice and support unit such as:

BKPA (Academic Advising and Counseling Unit)

BKPA serving the students to overcome academic and non-academic problem, which will direct or indirectly affect the academic performance of the students. BKPA also hold workshop for junior lecturer improve advising and supervising skill.

JPC (Job Placement Center)

JPC supporting student to get company for internship and fresh graduate to get a job through a job fairs which is held twice a year.

INFRASTRUCTURE FACILITIES

Reading Room

INFRASTRUCTURE FACILITIES

Class Room

Meeting & Exam Room

Meeting & Exam Room

Administration Office

INFRASTRUCTURE FACILITIES

Lecture Room

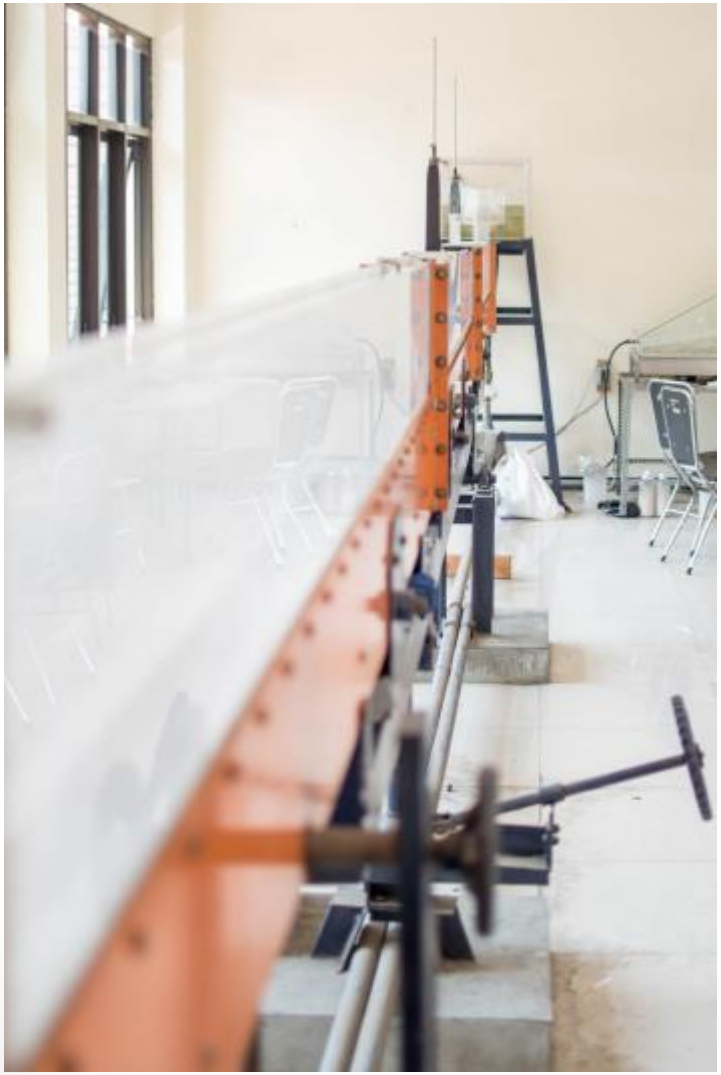
Lecture Room

Discussion area

Discussion area

INFRASTRUCTURE FACILITIES

1. Basic Hydraulic Lab



INFRASTRUCTURE FACILITIES

2. Applied Hydraulic Lab

INFRASTRUCTURE FACILITIES

3. Soil and Ground Water Lab

4. River and Swap Lab

INFRASTRUCTURE FACILITIES

5. Water Structure Design Lab

6. Hydrology Lab

INFRASTRUCTURE FACILITIES

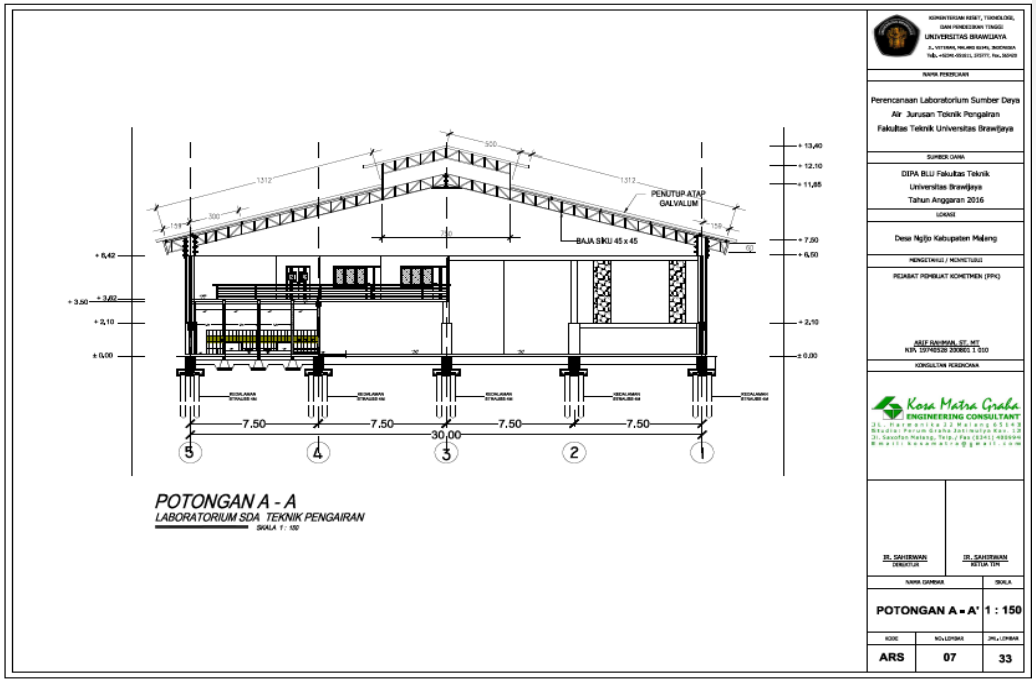
7. Water Resources Engineering Lab (30 m x 60 m = 1,800 m^2)

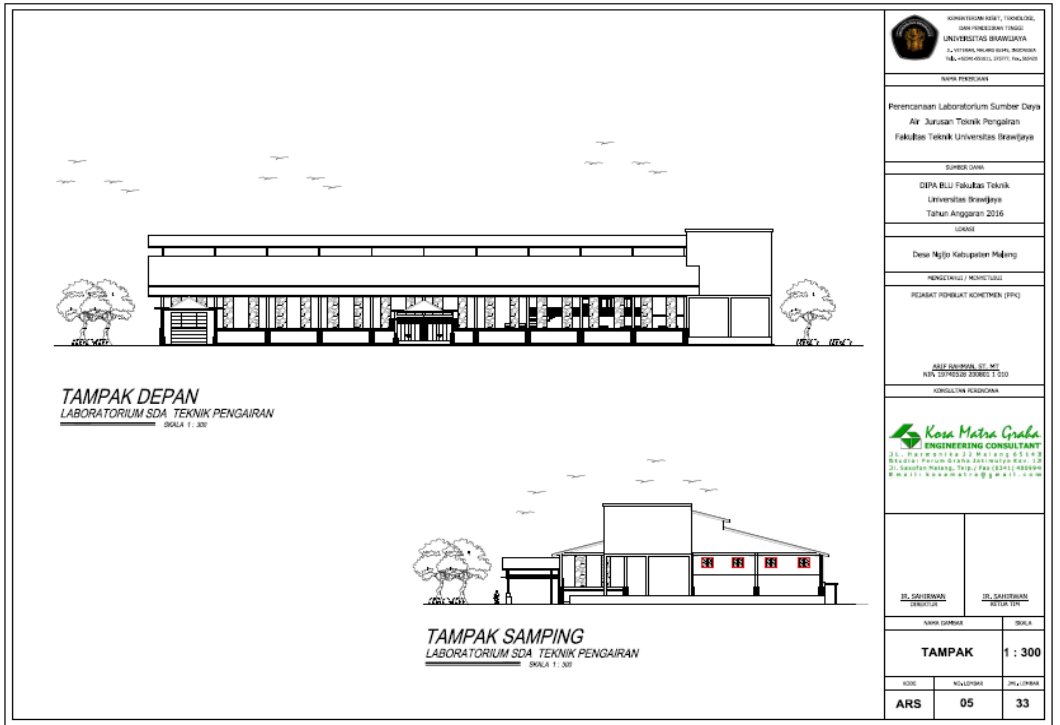
(under construction – Finished on December 2016)






Detail design drawing of WRE Labolatory





INFRASTRUCTURE FACILITIES

New Building for WRE – 6 floors , (under construction-)

Finished the end of December 2016

Student Profile

Floor 1 : River & Swap Lab

Floor 2 : Administration office

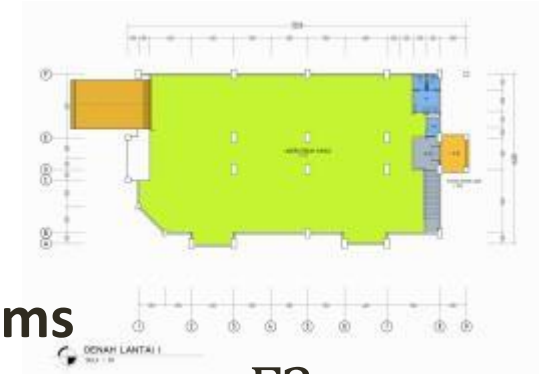
Floor 3 : Lecture Room, 14 rooms

Floor 4 : Class Room, 5 rooms

Floor 5 : Class Room, 5 rooms

Floor 6 : Hall Meeting room

F1



F2

F3

F4

F5

F6

INFRASTRUCTURE FACILITIES

Student Profile

Academic Year	Total Student	Student		Study Period (%)			Graduates GPA		
		Graduate	%	3.5 - 4 years	4 - 5 years	5-6 years	Min	Aver.	Max
2010/2011	404	71	18	37	45	18	2.98	3.31	3.7
2011/2012	436	59	14	28	46	26	2.94	3.18	3.86
2012/2013	599	61	10	14	43	43	2.43	3.23	3.62
2013/2014	606	101	17	25	46	29	2.77	3.28	3.75
2014/2015	621	70	11	39	31	30	2.80	3.25	3.81
Average		72	14	28,6	42,2	29,2	2,78	3,25	3,75

Alumni & Stakeholders and Feedback

http://pengairan.ub.ac.id/blog/tracer-study/

Annual Meeting

- **Student and Alumni**
  - Online Survey
  - Interview
  - Suggestion Box
- **User**
  - Questionnaire (Email)
  - Interview
- **Lecturer and Staff**
  - Questionnaire
  - Direct input during meeting
  - Suggestion Box
- **Society**
  - Input during community service activity

DOSEN DAN KARYAWAN

PENILAIAN REKAN SEJAWAT
FAKULTAS TEKNOLOGI PERTANIAN
UNIVERSITAS BRAWIJAYA

Mohon kesediaan Saudara untuk mengisi penilaian tersebut guna peningkatan kualitas pelayanan di Fakultas Teknologi Pertanian-UB pada Tahun 2013.

I. Identitas Diri :

1. Status : ☐ Dosen ☐ Karyawan
2. Jenis kelamin : ☐ Laki-laki ☐ Perempuan
3. Jurusan : ☐ THP ☐ TEP ☐ TIP

II. Pejabat yang Dinilai : _____

III. Petunjuk

Sesuai dengan yang Saudara ketahui, berilah penilaian secara jujur, objektif, dan penuh tanggung jawab terhadap rekan sejawat di Fakultas Teknologi Pertanian-UB. Penilaian dilakukan terhadap aspek-aspek dalam tabel berikut dengan cara memberi tanda centang (√) pada kolom skor. Atas partisipasinya kami sampaikan terima kasih.

NO	PENILAIAN	SKOR				
		1	2	3	4	5
1.	Kehadiran					
2.	Kedisiplinan					
3.	Kemampuan mengembangkan ide					

HOME » BERITA » UNDANGAN TRACER STUDY

Undangan Tracer Study

Ditulis pada tanggal 30 November 2015, oleh roni, pada kategori Berita

Undangan Tracer Study Alumni

Kepada Yth. Alumni Teknik Pengairan Universitas Brawijaya,

Tracer study ini dilaksanakan untuk menjaring masukan dan informasi dari alumni sebagai salah satu dasar yang penting bagi evaluasi dan pengembangan UB, maupun Teknik Pengairan dalam bidang kurikulum,proses pembelajaran, sarana dan prasarana, serta pelayanan.

Kami mengucapkan terima kasih atas partisipasi Saudara dalam mengisi kuesioner ini.

Ir. Moh. Sholichin MT., Ph.D.

ISI KUISIONER DISINI

Alumni Profile of BSWRE

Rector University of Brawijaya
Prof . Dr. Ir. Moh Bisri, MS
(Alumni ‘79)

Ministry of Public Works and Housing

Director of River, Directorate of Water Resources
Ministry of Public Works and Housing
Ir. Hari Suprayogi, M.Eng, (Graduate 1984)

Head of the Central River Region (BBWS) Opak Serayu
Directorate General (DG) Water Resources (SDA) of the
Ministry of Public Works and Housing (PUPR),
Ir. Tri Bayu Adji, MA , (Graduate 1984)

Head of the Central River Region BBWS Cimanuk Cisanggarung,
Ir. Tri Sasongko Widianto (Graduate 84)

Direktur PT. Tata Guna Patria, Jakarta

Dr. Ir. John P.Pantouw MS, (Graduate 85)

Head of National Association Of Indonesian Consultant, Branch DKI Jakarta
Ir. Peter Frans (Graduate 1988)
As a Directure for PT. Ciriajasa Engineering, Ltd

Manager of Civil Work in PT TOTAL OIL ,
Ir. M. Syamsudin Dananjaya, MMT, (Graduate 1991)

Balai Bendungan Direktorat Jenderal SDA
Head of Dam Association
Ir. Ahmad Zubaidi, M.Tech. (Graduate 1993)

Supt. Mine Civil, Road and Transporting.

PT. Kaltim Prima Coal

Ibadi Zalfatirsa, ST., MBA (Graduate 2005)

Alumni Profile of BSWRE

- Ministry of Public Works and Housing;
- Department Public work on Water Engineering sector.
- Consultants engineering Ltd, (government and private)
- Contractor engineering Ltd, (government and private)
- Universities or academics,
- Oil Company and Mine
- Agriculture sector,
- Water supply sector, etc,

Alumni Profile of BSWRE

Alumni Association : “FORUM ALUMNI PENGAIRAN” http://inawf.org/1010-2/

STAKEHOLDER SATISFACTION

Item	Year data			
	2012	2013	2014	2015
Integrity	3.07	3.18	3.01	3.22
professionnalisme	3.07	3.27	3.01	3.01
English	2.07	0.20	2.35	2.15
Communication	3.12	2.79	3.01	3.01
Teamwork	3.00	3.18	2.94	3.29
Self development	3.07	3.18	2.97	3.29

1. very unsatisfactory
2. less satisfactory
3. Satisfactory
4. Very satisfactory

Student Achievement

Dams National Design Competition 2015 : Gold Medal

Supervision : Dr. Eng. Andre P, MT

Student : 1. Aziz Rizal Prasetiyo

2. Warid Muttafaq

3. Imroatus Sholikhah

Video : Taliwang Dam

Student Achievement

Silver Medal on Macau Innovation and Invention Competition 2

Supervision by : Emma Yuliani, ST. MT., Ph.D

Student Name : 1. Maytri

2. Adibtiya

3. Yunus

Student Achievement

PIMNAS 27 Universitas Diponegoro - Bronze Medal

-pengairan-ub-antisipasi-tanah-longsor-dengan-limbah-tahu-8017.htm

Search

Jawa Pos
RADAR MALANG
Online

HOME MALANG RAYA EKONOMI PENDIDIKAN OLAHRAGA KESEHATAN ENTERTAINMENT AG

Mahasiswa Teknik Pengairan UB Antisipasi Tanah Longsor dengan Limbah Tahu

7 Juni 2014

Student Achievement

PIMNAS 28 (Bronze Medal) Universitas Kendari

Supervision by : Emma Yuliani, ST. MT., Ph.D
Student Name : 1. Maytri
2. Adibtiya
3. Yunus

Student Achievement

National irrigation network planning competition at University of Muhammadiyah Makassar, 21–23 April 2015

Winner I : Radya Gading W.; Rizki Adhitya N.; Ardian Suwindra
Winner II : Al Dirga Akbarshadana, Anas Zulfikar Rasyid, dan Rana Karinta Hapsari.
Winner III : M. Bagus Hari Santoso, Gigih Suryarawit, dan Yahya Muchaimin Aji.

Student Achievement

Best presenter on
Competition scientific paper with the title "spore-Infiltration wells Pori, Faculty of Agricultural Technology UB

Finalist on
Dams National Design Competition 2016

Student Achievement

ACTIVITY	ACHIEVEMENT
Student Science Week 27	Bronze Medals
Dams National Design Competition	1st Winner
Rector Cup Volley ball Tournament	1st Winner
Brawijaya Olympic Badminton	1st Winner
Brawijaya Olympic Badminton Mixed Doubles Catagory	1st Winner
Brawijaya Olympic Band Festival	1st Winner
Olympic Brawijaya Women's Kempo	3rd Winner
Competition of Design Irrigation	1st Winner
Competition of Design Irrigation	2nd Winner
Competition of Design Irrigation	3rd Winner
Scientific papers	4th Winner

Student Activities,

Students Association Website : http://hmp.ub.ac.id/;

“Pekan DAS Brantas Event”,
every 4 (four) years.

Student Activities,

Students Association Website : http://hmp.ub.ac.id/;

Clean Brantas River Activities each year : "Bersih 2 Sungai Brantas"

Student Activities

"WATER DAY" Activities

Student Activities

Promotion of WRE to Senior High School

Lecture in International Seminar

Dr. Ir. Pitojo Tri Juwono MT,

“ International seminar for Reservoir and Sedimentation “, Japan 2014

Dian Sisinggih ST. MT. Ph.D,

“ International seminar for Reservoir and Sedimentation “, Japan 2014

Lecture in International Seminar

Ir. Moh Shoclihin MT. PhD ,

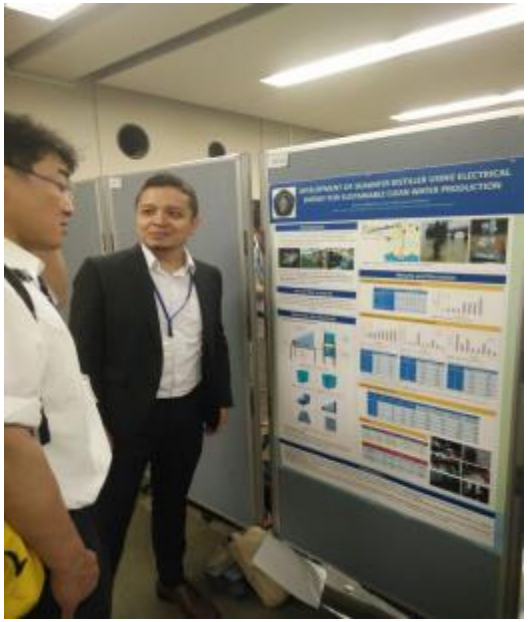
2nd International Young Researchers Workshop on River Basin Environment and Management on 5-6 January, 2015 Hanoi University of Science, Vietnam National University, Vietnam

Dr. Eng. Tri Budi Prayogo, ST., MT, South of Korea , 2016

Lecture in International Seminar

Dr. Eng. Riyanto Haribowo, ST., MT &

WET (Water and Environment Technology) Conference, Tokyo Japan 2016



Ir. Moh Shoclihin MT. PhD ,
WET (Water and Environment Technology) Conference, Tokyo Japan 2016.

Collaboration

“MOU” between UB & USM Penang Malaysia, 2015

Collaboration Work

"MOU" between UB & University of Technology Sydney, 2016

SWOT

STRENGTHS

- Good networking with alumni and Alumni have high position in national level
- Adequate infrastructure for educational process
- The management system has included planning, organizing, staffing, leading, representative and effective budgeting
- The average waiting period of graduates to work <3 month
- Good quality of students, they are good team work
- The composition of lecturers in the field of expertise and the age group is quite good

WEAKNESSES

- There are still low number of lecturers with professor title
- Human Resources that have credibility on the international level is still limited
- Many lecturer with master degree title (>50%)
- Completion of the thesis is very long (65%< 6 months)
- The laboratories have still got neither national accreditation certificate nor international

IMPROVMNET

- The accelerated "program professor"
- Improved network with international organizations
- Acceleration master lecturer for doctoral study abroad
- Improving supervision of students and help with related agencies
- Accelerate to obtain the certification laboratory by KAN. (National Accreditation Committee.)

THANK YOU

BACHELOR SCIENCE OF WATER RESOURCES ENGINEERING
FACULTY OF ENGINEERING
UNIVERSITY OF BRAWIJAYA